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Mountain Biking Skills

FROM THE MAKERS OF Mountain Biking UK

64 STEP-BY-STEP MASTERCLASSES

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- CORNER WITH CONVICTION
- **WHEELIE AND MANUAL**
- FIND THE BEST LINES
- **CONQUER JUMPS**

AND MUCH MORE!

E-MTB TIPS

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RIDE LIKE A PRO

HIT BLUE, RED AND BLACK RUNS WITH CONFIDENCE

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WELCOME

In reading this special edition you are taking the next pedal stroke on your journey to becoming a better mountain biker. Inside you'll find everything you need to know to make the most of anything a trail or bike park is likely to throw at you.

Crammed with step-by-step advice from top coaches and pro riders, this issue gives you the best and most up to date MTB riding knowledge available.

We've divided the mag into blue, red and black sections to help give the most relevant advice for the grade of trail you're currently riding and to help take you to the next level. The learning curve starts here!

WARNING Many of the riding techniques featured in this publication are suitable for advanced cyclists only. Individuals carrying out any of the techniques do so at their own risk. Individuals must use their own independent judgement to determine that they have sufficient riding ability to carry out the techniques in this magazine. Anyone under the age of 18 should be supervised by a responsible adult. You must seek medical advice if you have any injuries or medical conditions. Protective clothing and a helmet should be worn at all times and equipment should be inspected. To the fullest extent permitted by law, Immediate Media shall not have any liability in connection with the information in this magazine and disclaims all liability for any damage or injury to individuals or their equipment as a result of or relating to carrying out any of the techniques in this magazine.

CONTENTS

4 BIKE SET UP
How to perfectly dial in your bike to suit your kind of riding

6 FEMALE MTB SET UP
The best bike settings for women riders

8 BIKE PARK READY
All the gear you'll need and how to best tweak your bike ready for a day at the bike park

BLUE TRAIL SKILLS

12 Improve your riding
15 Perfect posture
16 Finding balance
17 Pedal smoothly
18 Brake control
19 Hold a high line
20 Grip in flat turns
22 Trail techniques
24 Simple berms
26 Cornering mistakes
28 Rollers
29 Table tops
30 Fast jumps
32 Uphill switchbacks
34 Master mud
40 Overcoming fear

RED TRAIL SKILLS

46 Riding ruts
47 Nailing berms
48 Railing turns
50 Wet roots
51 Descend at speed
52 Loose descents
54 Read the trail
58 Tight turns
60 Rock features
61 Aggro berms
62 Nail every jump
64 Jump obstacles
66 Boosting jumps
68 Jumping faults
70 Step downs
72 Drop to downslope
74 Flat out drops
75 Steep climbs
76 Ride flat out

BLACK TRAIL SKILLS

80 Gnarly roots
82 Big rock gardens
84 Launching drops
85 Rocks and scree
86 Steep chutes
88 Scrub jumps
90 Blind jumps
92 Gap jumps
94 Sending jumps

E-BIKE SKILLS

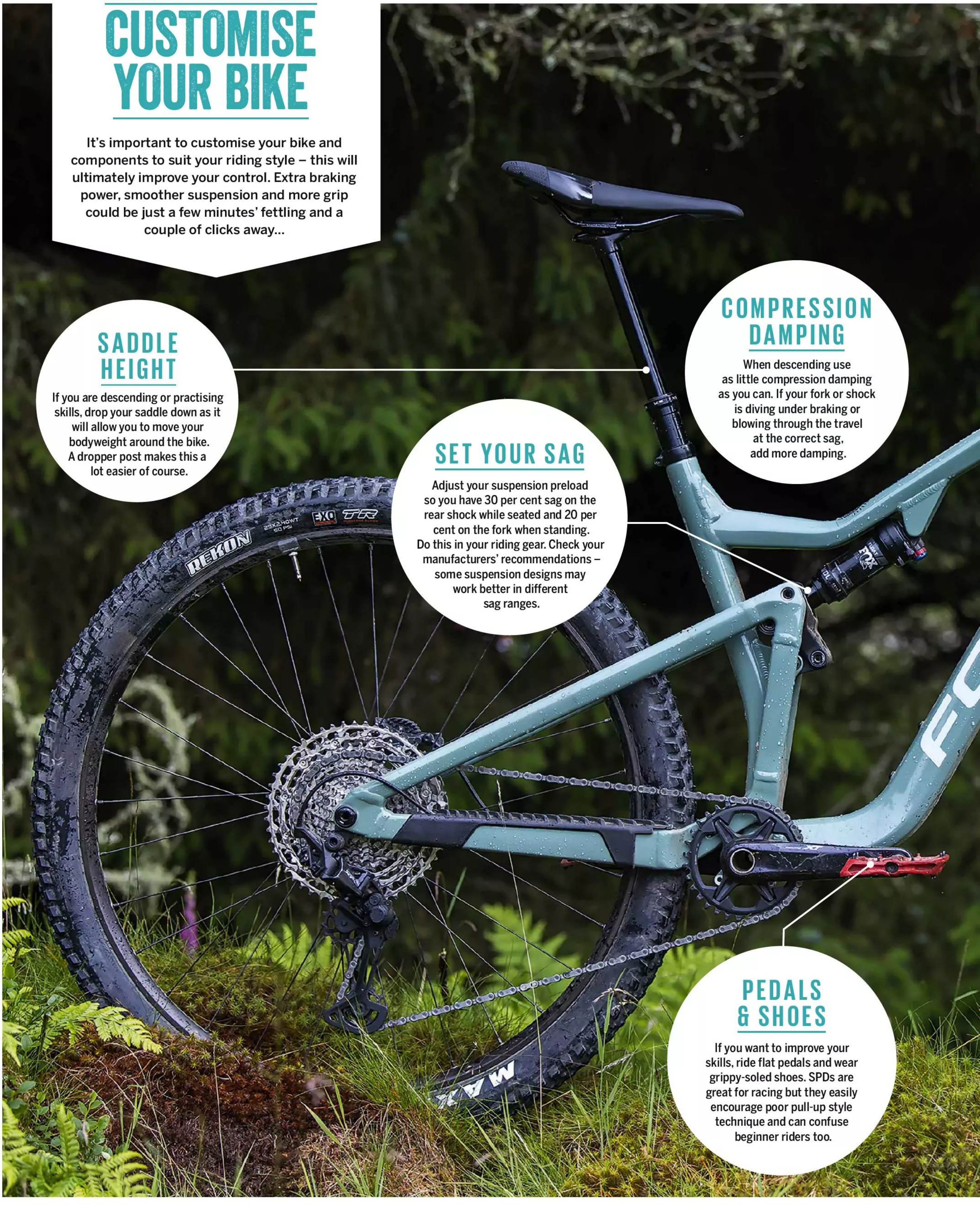
96 Cornering
97 Jumping
98 Pedalling
99 Suspension
100 Power modes
102 Climbing

TRAIL TRICKS

104 Wheelie
105 Manual
106 Bunnyhop
108 Manual through rollers
110 Scandi flick
112 Hop on obstacle
114 Send it with style

CUSTOMISE YOUR BIKE

It's important to customise your bike and components to suit your riding style – this will ultimately improve your control. Extra braking power, smoother suspension and more grip could be just a few minutes' fettling and a couple of clicks away...



SADDLE HEIGHT

If you are descending or practising skills, drop your saddle down as it will allow you to move your bodyweight around the bike. A dropper post makes this a lot easier of course.

COMPRESSION DAMPING

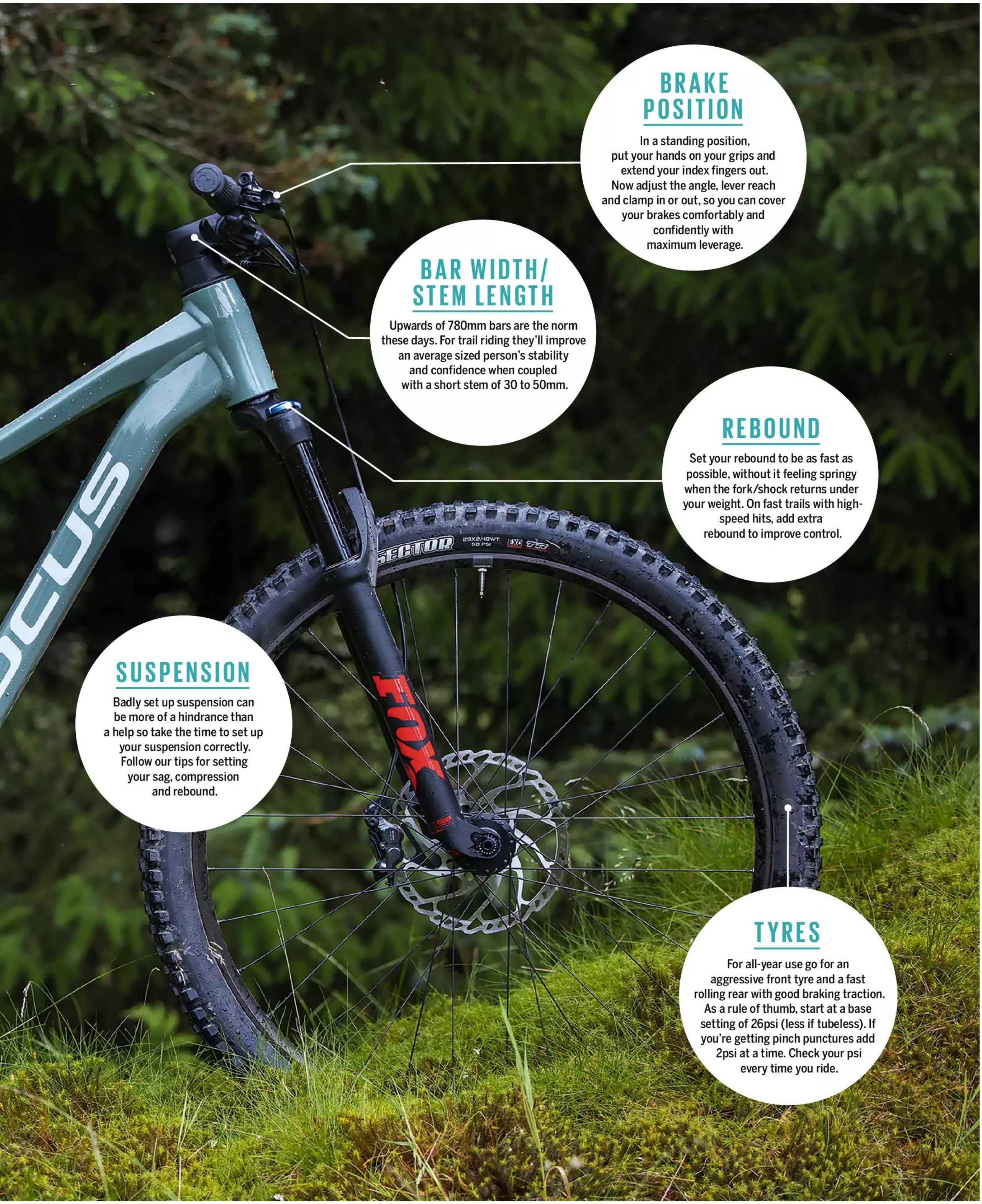
When descending use as little compression damping as you can. If your fork or shock is diving under braking or blowing through the travel at the correct sag, add more damping.

SET YOUR SAG

Adjust your suspension preload so you have 30 per cent sag on the rear shock while seated and 20 per cent on the fork when standing. Do this in your riding gear. Check your manufacturers' recommendations – some suspension designs may work better in different sag ranges.

PEDALS & SHOES

If you want to improve your skills, ride flat pedals and wear grippy-soled shoes. SPDs are great for racing but they easily encourage poor pull-up style technique and can confuse beginner riders too.



BRAKE POSITION

In a standing position, put your hands on your grips and extend your index fingers out. Now adjust the angle, lever reach and clamp in or out, so you can cover your brakes comfortably and confidently with maximum leverage.

BAR WIDTH/ STEM LENGTH

Upwards of 780mm bars are the norm these days. For trail riding they'll improve an average sized person's stability and confidence when coupled with a short stem of 30 to 50mm.

REBOUND

Set your rebound to be as fast as possible, without it feeling springy when the fork/shock returns under your weight. On fast trails with high-speed hits, add extra rebound to improve control.

SUSPENSION

Badly set up suspension can be more of a hindrance than a help so take the time to set up your suspension correctly. Follow our tips for setting your sag, compression and rebound.

TYRES

For all-year use go for an aggressive front tyre and a fast rolling rear with good braking traction. As a rule of thumb, start at a base setting of 26psi (less if tubeless). If you're getting pinch punctures add 2psi at a time. Check your psi every time you ride.

TWEAK A BIKE TO SUIT A FEMALE RIDER

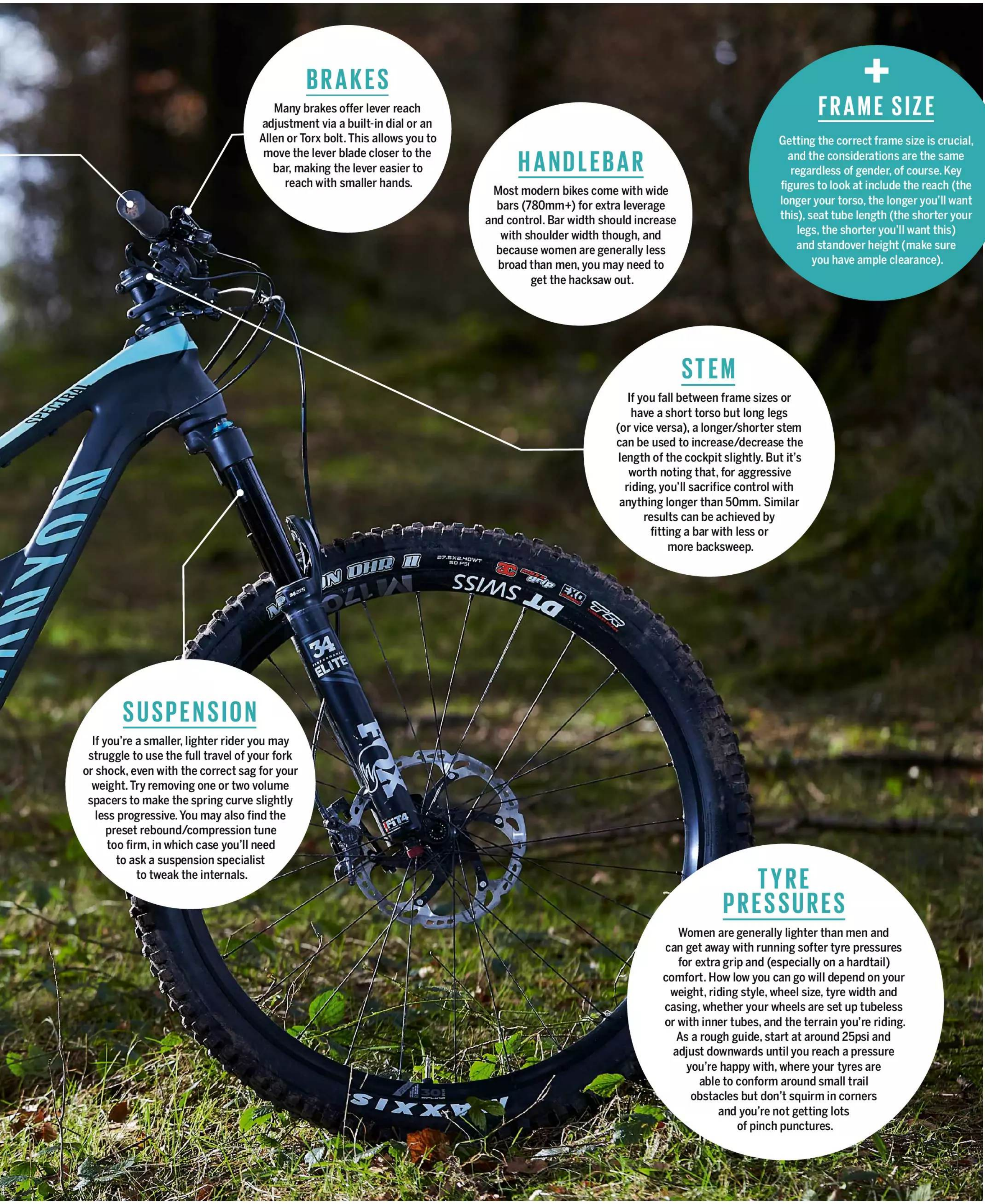
Many so-called women's bikes are just unisex models (which is in itself a bit of a misnomer, because the frames tend to be designed around typical male proportions) with some flowery colours and a wider saddle. They may be available in smaller sizes, but generally have the same geometry (Canyon and Liv are both brands that offer female-specific MTB frames). And choice is often distinctly limited in terms of the different models and specs available. All of this means that buying a unisex bike and fine-tuning it to suit is often the best route to go down, especially for more serious, aggressive, taller or heavier female riders. Here are some key set-up pointers...

GRIPS

Smaller hands require narrower grips. Trying to hang on to grips that are too big in diameter will tire out your hands and make your forearms pump up. A few women's-specific options are available, but it's generally just a case of picking some grips that suit your hand span.

SADDLE

Saddle soreness may just be the most talked-about topic in women's cycling, so fitting a decent female-specific seat is the first thing you should do if you opt for a unisex bike. There are tons of options out there – our favourites include Specialized's Power models with Mimic technology, fi'zi:k's Luna X5 and Bontrager's Yatra. Don't be fooled into thinking that thicker padding will equal more comfort. Getting a perch that has a cut-out to reduce soft-tissue pressure and is the correct width for your sit bones is much more important. You should be able to get advice and fitting help at your local bike shop.



BRAKES

Many brakes offer lever reach adjustment via a built-in dial or an Allen or Torx bolt. This allows you to move the lever blade closer to the bar, making the lever easier to reach with smaller hands.

HANDLEBAR

Most modern bikes come with wide bars (780mm+) for extra leverage and control. Bar width should increase with shoulder width though, and because women are generally less broad than men, you may need to get the hacksaw out.

+ FRAME SIZE

Getting the correct frame size is crucial, and the considerations are the same regardless of gender, of course. Key figures to look at include the reach (the longer your torso, the longer you'll want this), seat tube length (the shorter your legs, the shorter you'll want this) and standover height (make sure you have ample clearance).

STEM

If you fall between frame sizes or have a short torso but long legs (or vice versa), a longer/shorter stem can be used to increase/decrease the length of the cockpit slightly. But it's worth noting that, for aggressive riding, you'll sacrifice control with anything longer than 50mm. Similar results can be achieved by fitting a bar with less or more backsweep.

SUSPENSION

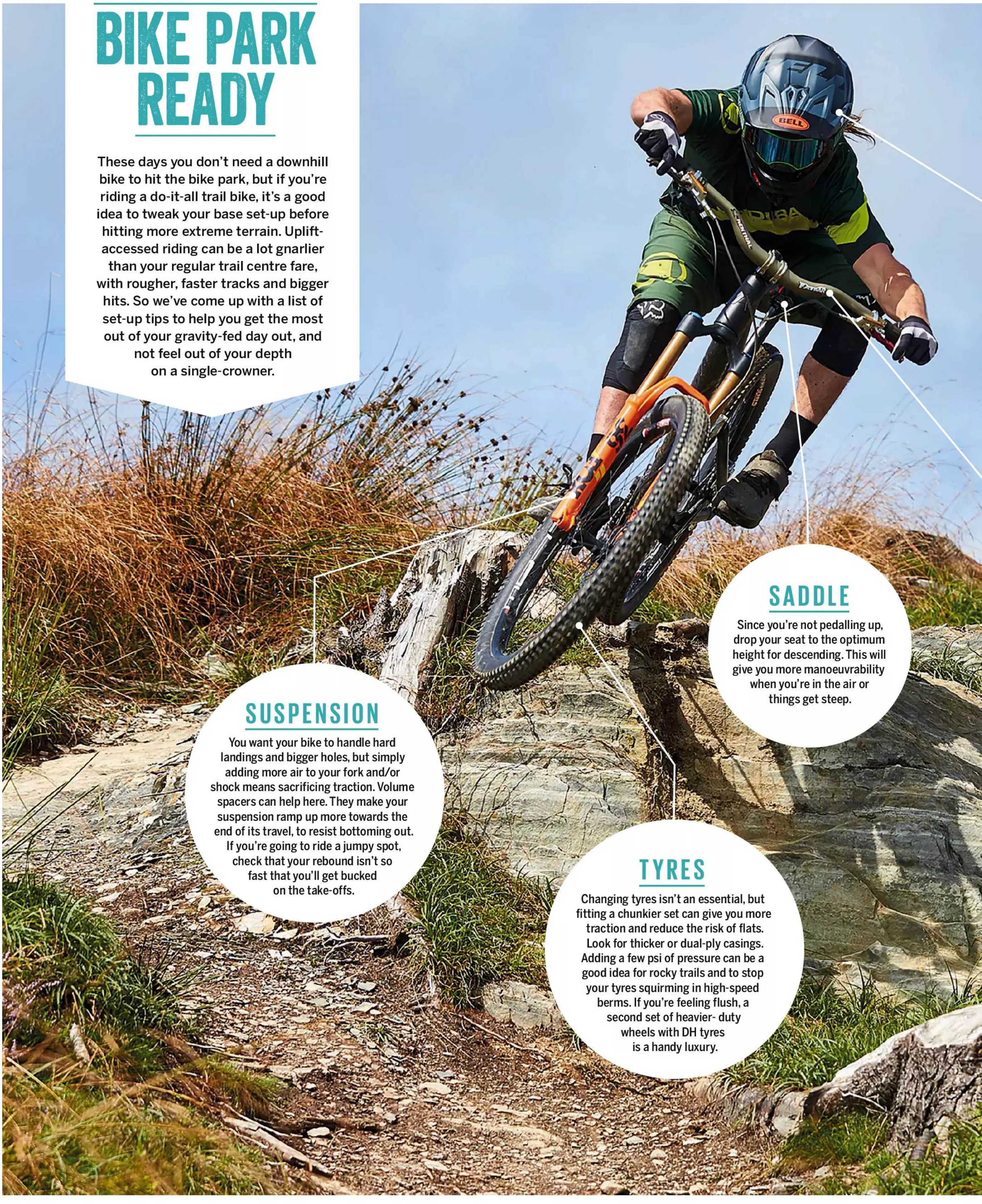
If you're a smaller, lighter rider you may struggle to use the full travel of your fork or shock, even with the correct sag for your weight. Try removing one or two volume spacers to make the spring curve slightly less progressive. You may also find the preset rebound/compression tune too firm, in which case you'll need to ask a suspension specialist to tweak the internals.

TYRE PRESSURES

Women are generally lighter than men and can get away with running softer tyre pressures for extra grip and (especially on a hardtail) comfort. How low you can go will depend on your weight, riding style, wheel size, tyre width and casing, whether your wheels are set up tubeless or with inner tubes, and the terrain you're riding. As a rough guide, start at around 25psi and adjust downwards until you reach a pressure you're happy with, where your tyres are able to conform around small trail obstacles but don't squirm in corners and you're not getting lots of pinch punctures.

BIKE PARK READY

These days you don't need a downhill bike to hit the bike park, but if you're riding a do-it-all trail bike, it's a good idea to tweak your base set-up before hitting more extreme terrain. Uplift-accessed riding can be a lot gnarlier than your regular trail centre fare, with rougher, faster tracks and bigger hits. So we've come up with a list of set-up tips to help you get the most out of your gravity-fed day out, and not feel out of your depth on a single-crowner.



SADDLE

Since you're not pedalling up, drop your seat to the optimum height for descending. This will give you more manoeuvrability when you're in the air or things get steep.

SUSPENSION

You want your bike to handle hard landings and bigger holes, but simply adding more air to your fork and/or shock means sacrificing traction. Volume spacers can help here. They make your suspension ramp up more towards the end of its travel, to resist bottoming out. If you're going to ride a jumpy spot, check that your rebound isn't so fast that you'll get bucked on the take-offs.

TYRES

Changing tyres isn't an essential, but fitting a chunkier set can give you more traction and reduce the risk of flats. Look for thicker or dual-ply casings. Adding a few psi of pressure can be a good idea for rocky trails and to stop your tyres squirming in high-speed berms. If you're feeling flush, a second set of heavier- duty wheels with DH tyres is a handy luxury.

PROTECTION

Faster speeds and hardpack trails mean that binning it in the bike park can really suck! You don't have to pedal up, so don some extra protective kit – we'd recommend a full-face helmet, goggles and knee pads. Elbow pads and a spine board are a good idea too. Your car is at the bottom of the hill, so ditch the backpack and enjoy more freedom of movement.

HANDLEBAR

On steeper, faster trails it helps to have your front end a bit higher to help you shift your weight back when you need to. An extra spacer under the stem can make a noticeable difference.

'ERY DAY I'M SHUTTLIN'

Follow these tips to help you make the most of your day in the bike park

QUICK ONCE-OVER

Even if you don't tweak your set-up, check your bike, making sure that all the bolts are torqued correctly, the brake pads have life left in them and the suspension pressures are right.

EASE IN

Don't drop in blind on the hardest trail in the park – it's only going to end in tears. Build things up slowly and look before you leap on jumps. Qualifiers at the start of trails are a good way to gauge how hard things are going to be. Build up the pace, but be conscious of when you're getting tired and stop before you crash.

FUEL RIGHT

It's amazing how many riders we see on uplift days who are knackered and heading home way before the end of the day. Lift passes are expensive, so make the most of them – eating the right food will really help. Avoid sugary snacks and drinks that'll give you energy spikes and slumps, and don't eat a big, heavy, fatty meal at lunch. Swap the burger and chips for slow-release carbs to be the last person on the hill.

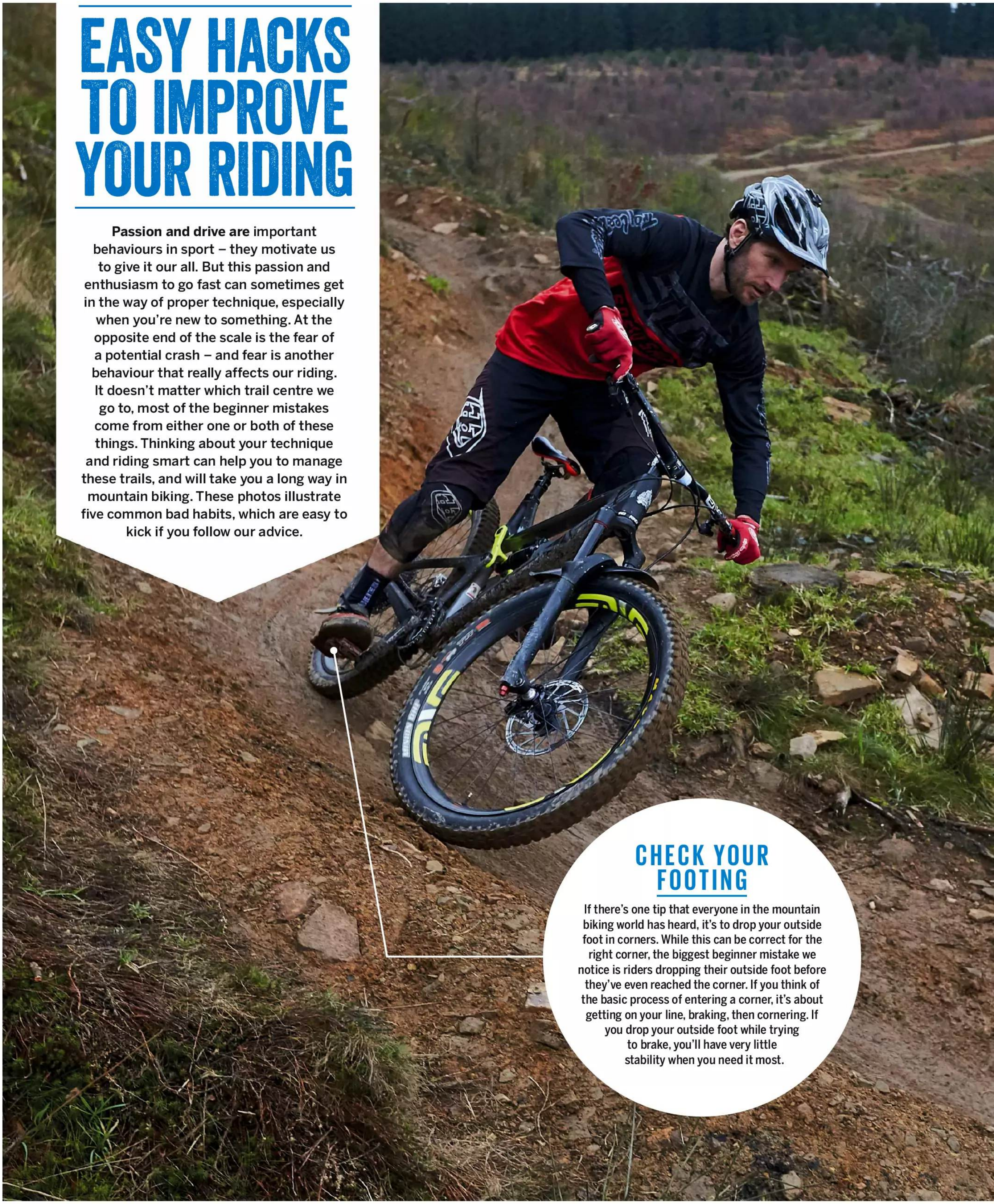
BLUE

Everything you need to know to tackle blue trails with confidence

TRAIL SKILLS

EASY HACKS TO IMPROVE YOUR RIDING

Passion and drive are important behaviours in sport – they motivate us to give it our all. But this passion and enthusiasm to go fast can sometimes get in the way of proper technique, especially when you're new to something. At the opposite end of the scale is the fear of a potential crash – and fear is another behaviour that really affects our riding. It doesn't matter which trail centre we go to, most of the beginner mistakes come from either one or both of these things. Thinking about your technique and riding smart can help you to manage these trails, and will take you a long way in mountain biking. These photos illustrate five common bad habits, which are easy to kick if you follow our advice.



CHECK YOUR FOOTING

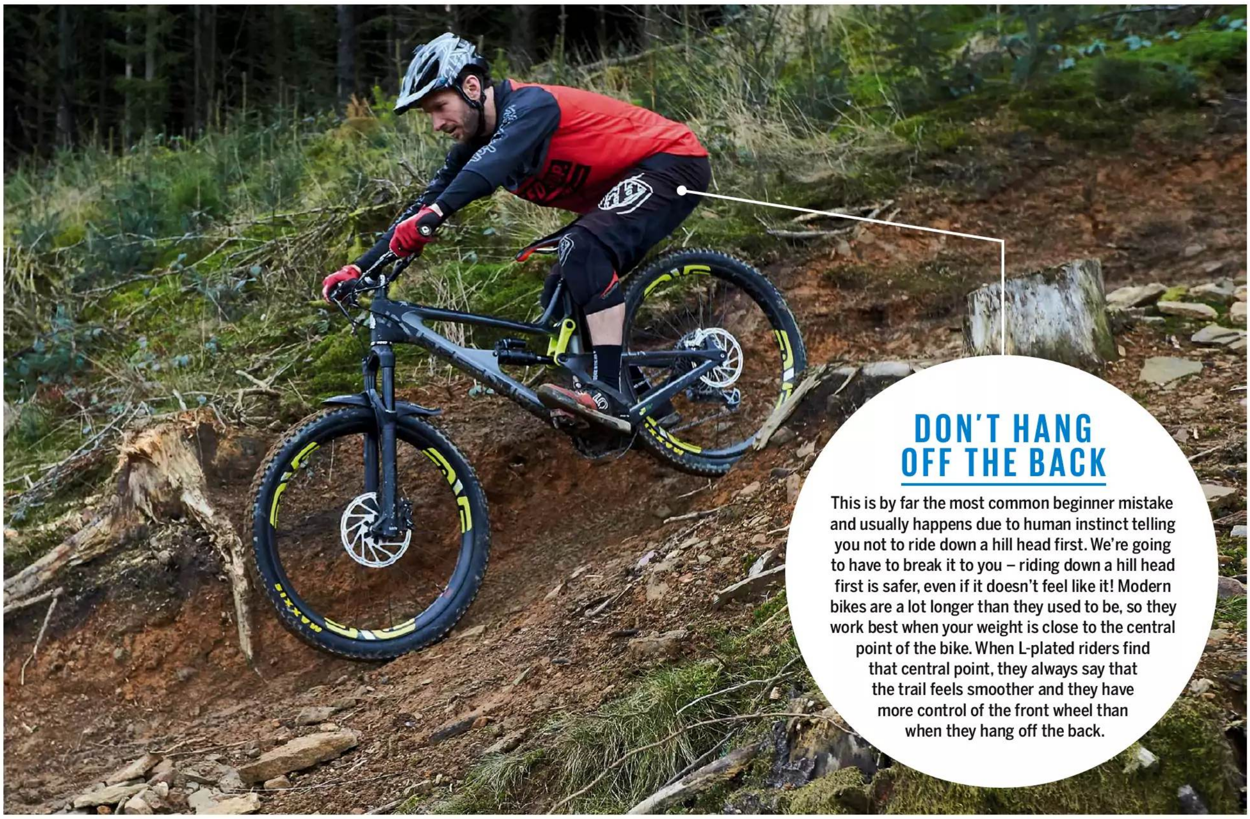
If there's one tip that everyone in the mountain biking world has heard, it's to drop your outside foot in corners. While this can be correct for the right corner, the biggest beginner mistake we notice is riders dropping their outside foot before they've even reached the corner. If you think of the basic process of entering a corner, it's about getting on your line, braking, then cornering. If you drop your outside foot while trying to brake, you'll have very little stability when you need it most.

DON'T FOCUS ON YOUR FRONT WHEEL

As a new(ish) rider, it's common to stare at your front wheel, because you're not trusting what it's going to do. You're worried it might slide out, which is an understandable concern. Trust in the grip of your front tyre will develop naturally over time, but to speed that process up, practise keeping your focus on the section of trail coming up ahead. That way, things won't spring themselves on you so suddenly, and you'll be able to plan your line and where to use the brakes to slow down. Trust in your front wheel will also increase if you keep your body further forward and your arms bent. An improved body position will help to stop you from looking at the front wheel.

PUMP ROLLERS, DON'T JUMP THEM

Getting air off single rollers can be super fun, but as those who've tried it will know, the landing isn't always the most comfortable! As a beginner, if you're wanting to get some airtime, we'd advise practising on a tabletop jump instead of single rollers. Use the rollers as a chance to improve your squashing and pumping instead, so you can start to pick up speed and efficiency down the trail.



DON'T HANG OFF THE BACK

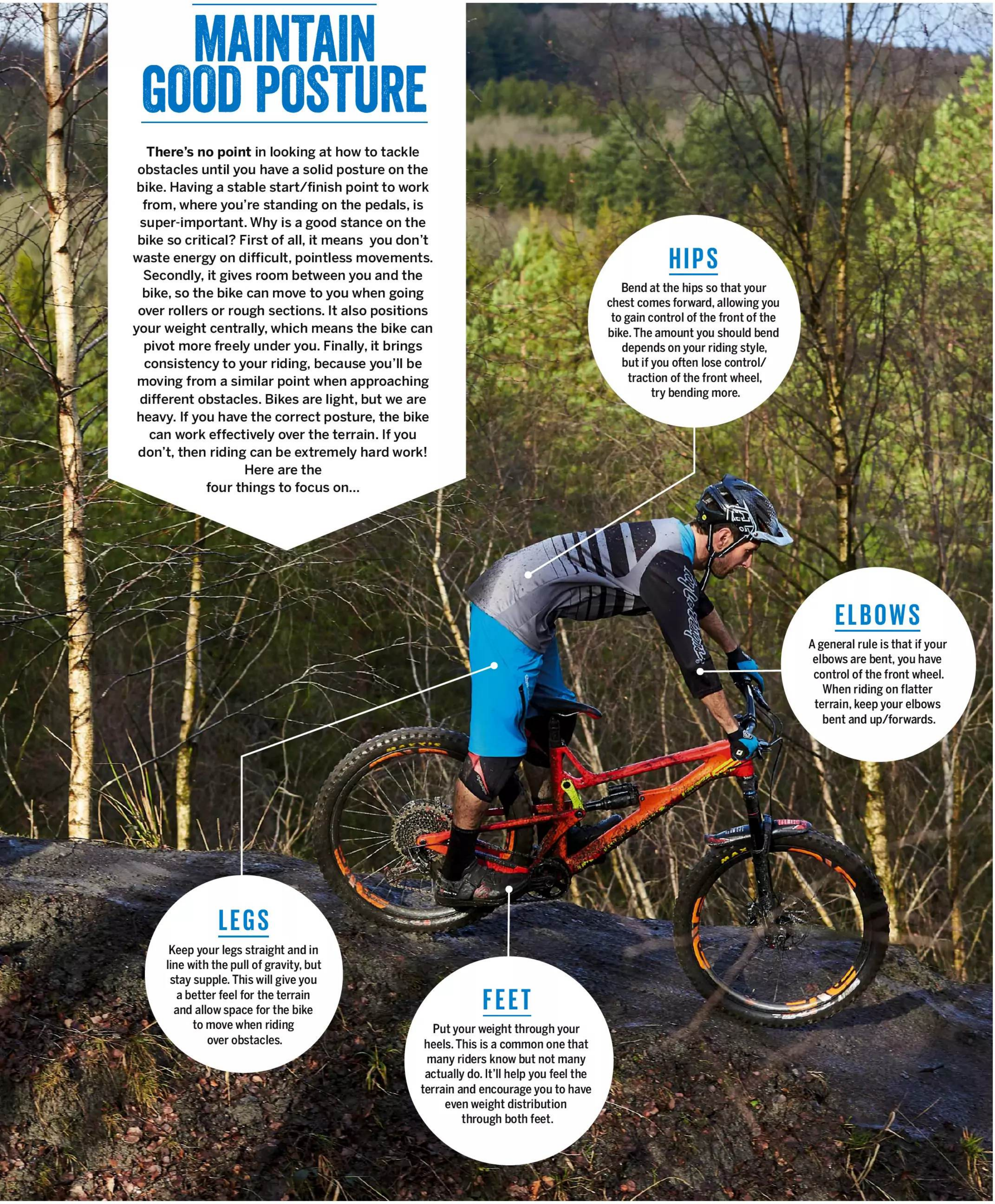
This is by far the most common beginner mistake and usually happens due to human instinct telling you not to ride down a hill head first. We're going to have to break it to you – riding down a hill head first is safer, even if it doesn't feel like it! Modern bikes are a lot longer than they used to be, so they work best when your weight is close to the central point of the bike. When L-plated riders find that central point, they always say that the trail feels smoother and they have more control of the front wheel than when they hang off the back.

SLOW DOWN

This one sits within the "passion and drive" behaviour mentioned earlier. Gritting your teeth and going for it is certainly one way to learn to ride bikes, but it has its limits. We'd advise slowing down and working hard to improve your technique, instead of just throwing yourself in at the deep end. When you go for a ride, try to keep a calm frame of mind, and you'll see how much easier riding becomes, as well as how much more time you have to anticipate and process what's coming next.

MAINTAIN GOOD POSTURE

There's no point in looking at how to tackle obstacles until you have a solid posture on the bike. Having a stable start/finish point to work from, where you're standing on the pedals, is super-important. Why is a good stance on the bike so critical? First of all, it means you don't waste energy on difficult, pointless movements. Secondly, it gives room between you and the bike, so the bike can move to you when going over rollers or rough sections. It also positions your weight centrally, which means the bike can pivot more freely under you. Finally, it brings consistency to your riding, because you'll be moving from a similar point when approaching different obstacles. Bikes are light, but we are heavy. If you have the correct posture, the bike can work effectively over the terrain. If you don't, then riding can be extremely hard work! Here are the four things to focus on...



HIPS

Bend at the hips so that your chest comes forward, allowing you to gain control of the front of the bike. The amount you should bend depends on your riding style, but if you often lose control/traction of the front wheel, try bending more.

ELBOWS

A general rule is that if your elbows are bent, you have control of the front wheel. When riding on flatter terrain, keep your elbows bent and up/forwards.

LEGS

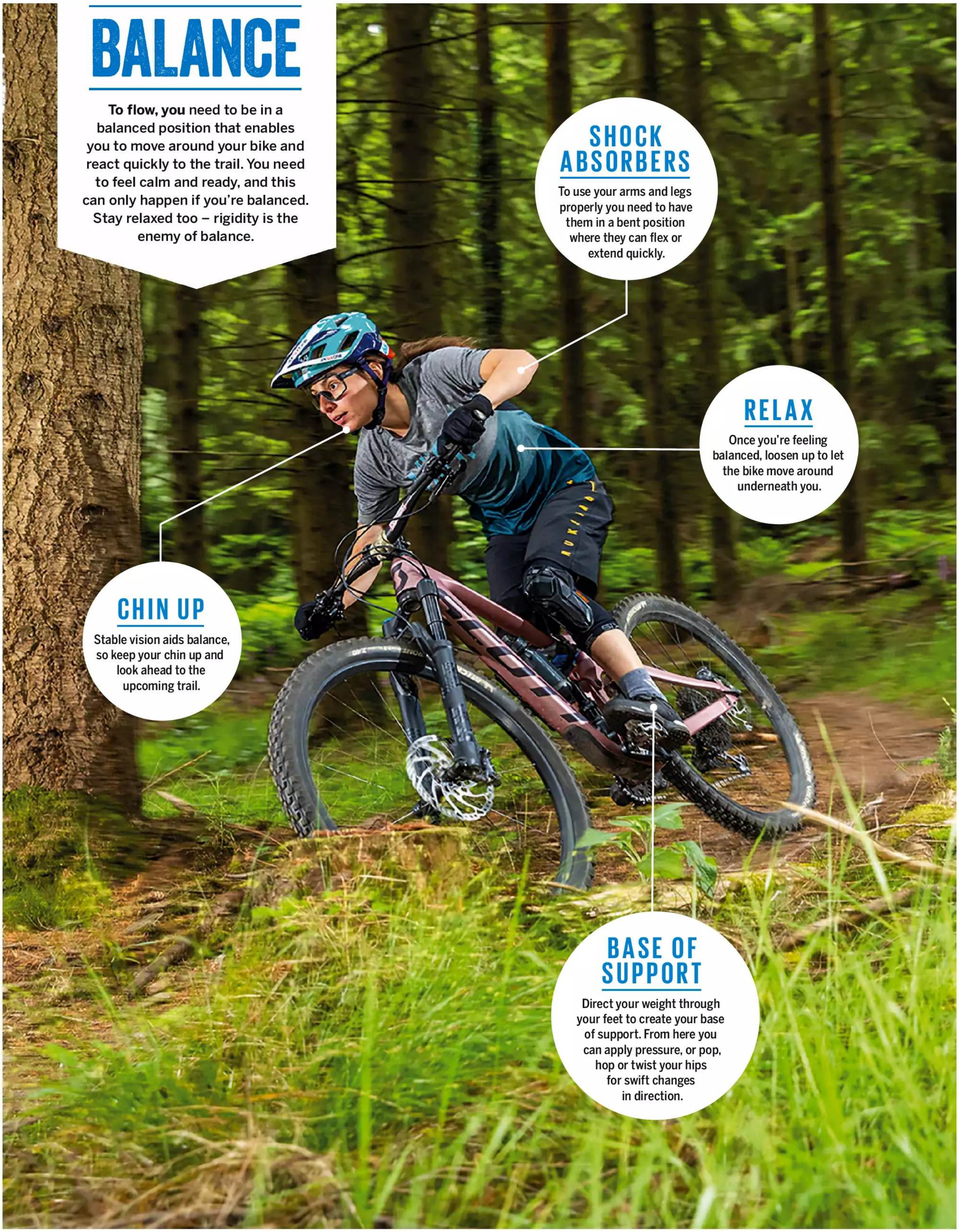
Keep your legs straight and in line with the pull of gravity, but stay supple. This will give you a better feel for the terrain and allow space for the bike to move when riding over obstacles.

FEET

Put your weight through your heels. This is a common one that many riders know but not many actually do. It'll help you feel the terrain and encourage you to have even weight distribution through both feet.

BALANCE

To flow, you need to be in a balanced position that enables you to move around your bike and react quickly to the trail. You need to feel calm and ready, and this can only happen if you're balanced. Stay relaxed too – rigidity is the enemy of balance.



SHOCK ABSORBERS

To use your arms and legs properly you need to have them in a bent position where they can flex or extend quickly.

RELAX

Once you're feeling balanced, loosen up to let the bike move around underneath you.

CHIN UP

Stable vision aids balance, so keep your chin up and look ahead to the upcoming trail.

BASE OF SUPPORT

Direct your weight through your feet to create your base of support. From here you can apply pressure, or pop, hop or twist your hips for swift changes in direction.

PEDALLING SMOOTHLY

As a mountain biker, pedalling is your main source of acceleration. It's probably not something most of us think that much about, but you'll expend a lot more energy if you mash the pedals aimlessly instead of spinning smooth circles. This is even more of an imperative on full-sus bikes, where bad technique will divert your effort into bobbing the suspension rather than driving you forward.

1 CADENCE

We all have our preferred cadence (pedalling speed). Some like to spin, whereas others favour harder, slower strokes. Often riders are in too hard a gear – either up a climb or off from the start of a race. If you push too hard, you'll accelerate less efficiently and be slower overall when compared to using an easier gear.

2 POSITION

This is your stance over the cranks. Many riders have their saddle too far back, so when they're climbing their legs are in front of them. For seated pedalling, try to keep your weight over the pedals so you're driving straight down onto them. This is the same when standing up too. After your first couple of pedal strokes, shift your weight forward to get maximum drive.

3 MUSCLES

Something we learned from MTB coach Andy Wadsworth is which muscles to use when pedalling. Now obviously, you need to use your legs, but the two big ones to focus on activating are your core and glutes (bum). When you pedal like this, it'll help stabilise your legs and produce more pedal power, but using your core while breathing hard will take practice.

4 SPINNING

Work on driving positively and firmly on the pedals, rather than stamping down on them. A choppy, uneven motion will make it harder for the back tyre to grip, especially when the going gets steep or loose. In contrast, a fluid rotation of the pedals will allow you to build speed consistently. It'll also help prevent a full-suspension bike from bouncing around as much.

BRAKE CONTROL

"Get off the brakes – that'll make you go faster!" We've all joked about this before, but it's actually the worst way to get more speed. Using your brakes in a controlled way – rather than death-gripping the handlebar and hurtling down the trail out of control – will give you far more flow and overall momentum.

BRAKING TOO MUCH?

Conscious braking is something to work on to help you realise exactly where to use the brakes. Practise sections of trail where you make braking the thing you think about most. Try riding into the section with a plan of where you want to slow down and where you want to let off. Obviously, you don't want to be consciously braking all the time, but it's a good training technique and will become second nature in time.

1 MODULATION

Modulating your braking means adjusting the force with which you pull the levers. Contrary to popular belief, brakes aren't an on/off toggle – they produce gradual and progressive stopping power the harder you pull them. Minor adjustments make quite a difference to whether or not the wheel locks up. Practise riding down a steep hill and pulling the brake levers as hard as you can without skidding to help you learn the bite point.

2 BALANCE

By balance, we mean the amount you're pulling one brake compared to the other. It's common to see riders being too heavy-handed with the back brake, which makes the rear wheel slide and the bike get out of shape. If that sounds familiar, try using a little less rear brake and/or a little more front. While a lot of stopping power comes from the front brake, too much can throw your weight forward and put you off balance, and even make the wheel slide out.

3 TIMING

Working out the optimum braking point is tough, especially for less-experienced riders. The general rule is to accelerate all the way through a section of trail. So, if you're having to slow down through a section, that's a sign you need to brake earlier. In corners, it's essential to brake only on entry, then let off for maximum traction. This takes discipline, which can be hard. Bad habits often creep back in when you're trying to ride at your limit.

4 TERRAIN

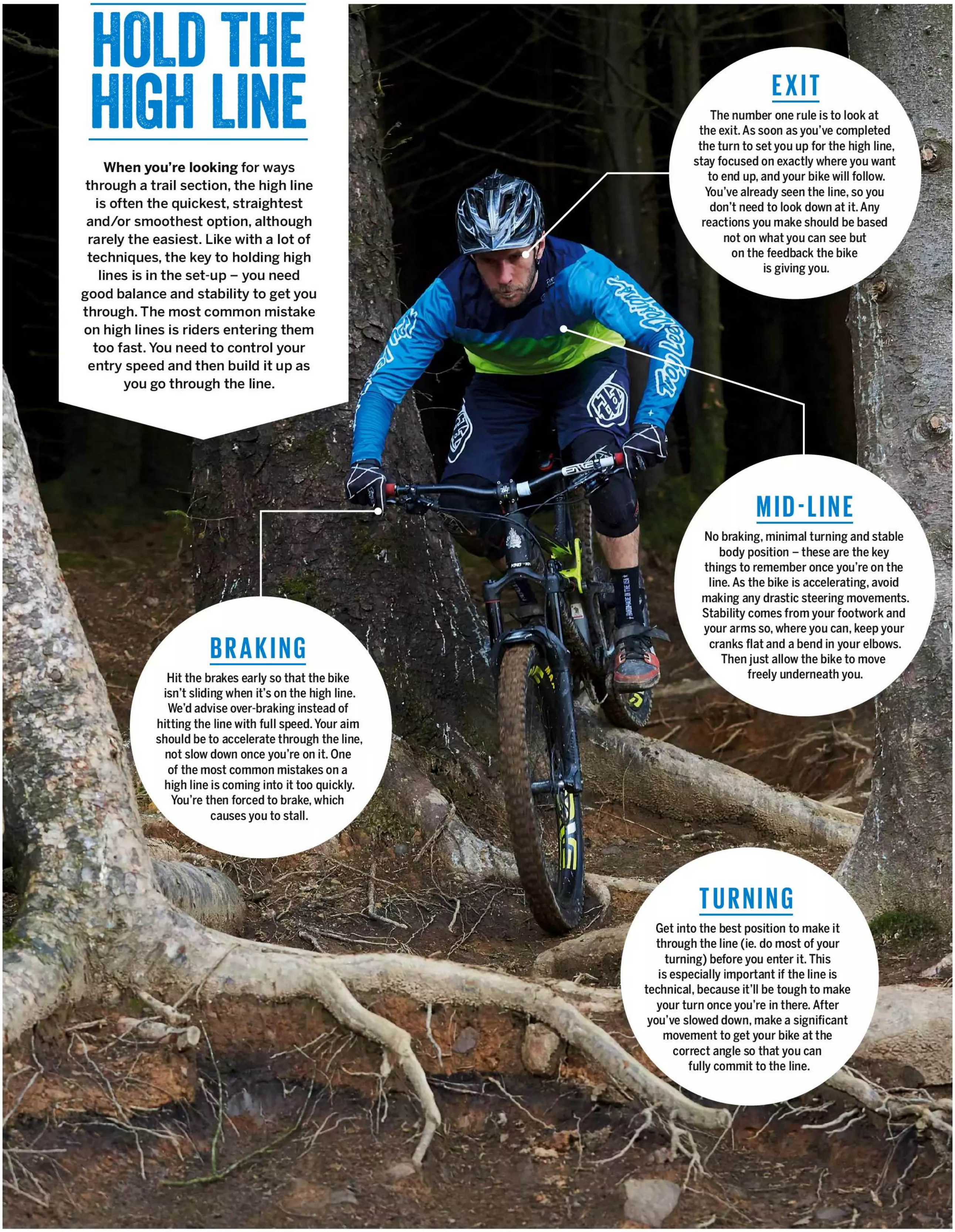
Trail conditions have a significant impact on how you should use your brakes. We'd advise experimenting with your modulation, balance and timing on different types of terrain to see what works best for you. Here are some useful pointers:

RUTTED OR DEEP DUST – use less front brake.

SUPER-ROUGH – change where you brake, so the suspension isn't inhibited and the bike doesn't bounce around.

HOLD THE HIGH LINE

When you're looking for ways through a trail section, the high line is often the quickest, straightest and/or smoothest option, although rarely the easiest. Like with a lot of techniques, the key to holding high lines is in the set-up – you need good balance and stability to get you through. The most common mistake on high lines is riders entering them too fast. You need to control your entry speed and then build it up as you go through the line.



EXIT

The number one rule is to look at the exit. As soon as you've completed the turn to set you up for the high line, stay focused on exactly where you want to end up, and your bike will follow. You've already seen the line, so you don't need to look down at it. Any reactions you make should be based not on what you can see but on the feedback the bike is giving you.

MID-LINE

No braking, minimal turning and stable body position – these are the key things to remember once you're on the line. As the bike is accelerating, avoid making any drastic steering movements. Stability comes from your footwork and your arms so, where you can, keep your cranks flat and a bend in your elbows. Then just allow the bike to move freely underneath you.

BRAKING

Hit the brakes early so that the bike isn't sliding when it's on the high line. We'd advise over-braking instead of hitting the line with full speed. Your aim should be to accelerate through the line, not slow down once you're on it. One of the most common mistakes on a high line is coming into it too quickly. You're then forced to brake, which causes you to stall.

TURNING

Get into the best position to make it through the line (ie. do most of your turning) before you enter it. This is especially important if the line is technical, because it'll be tough to make your turn once you're in there. After you've slowed down, make a significant movement to get your bike at the correct angle so that you can fully commit to the line.

FIND GRIP IN FLAT TURNS

Have you ever noticed that most bike parks bring berm after berm, all the way down the trail? That's because flat corners can be a flow killer – they're harder to find grip on, commit to and carry speed through. With the correct technique though, you can rail these turns just like any other. Follow our tips to find as much grip as possible and keep your speed.

SPOT THE EXIT

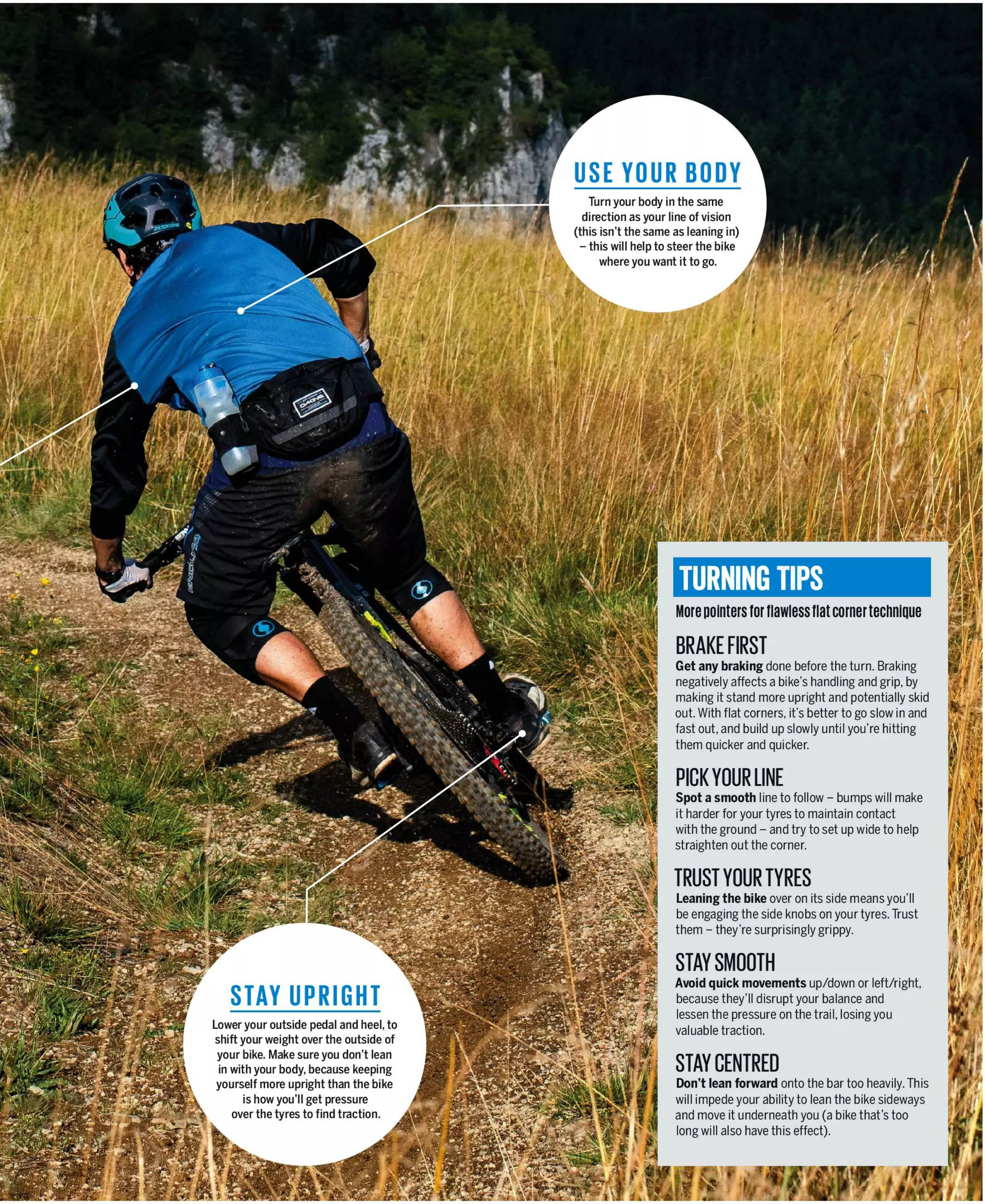
Fix your vision looking around the corner, towards the exit of the turn, by keeping your head up. You ride where you look.

LEAN THE BIKE

Drop your inside hand towards the centre of the turn to lean your bike over, and let your hand unweight as it moves further away from your body. This will increase the pressure on your outside hand, and help you maintain front tyre grip. Keep the outside elbow high to maintain a strong position.

GET CENTRED

Approach flat corners in a centred position on the bike – with your weight over the bottom bracket – as this is where you'll have the most balance, and the best manoeuvrability.



USE YOUR BODY

Turn your body in the same direction as your line of vision (this isn't the same as leaning in) – this will help to steer the bike where you want it to go.

STAY UPRIGHT

Lower your outside pedal and heel, to shift your weight over the outside of your bike. Make sure you don't lean in with your body, because keeping yourself more upright than the bike is how you'll get pressure over the tyres to find traction.

TURNING TIPS

More pointers for flawless flat corner technique

BRAKE FIRST

Get any braking done before the turn. Braking negatively affects a bike's handling and grip, by making it stand more upright and potentially skid out. With flat corners, it's better to go slow in and fast out, and build up slowly until you're hitting them quicker and quicker.

PICK YOUR LINE

Spot a smooth line to follow – bumps will make it harder for your tyres to maintain contact with the ground – and try to set up wide to help straighten out the corner.

TRUST YOUR TYRES

Leaning the bike over on its side means you'll be engaging the side knobs on your tyres. Trust them – they're surprisingly grippy.

STAY SMOOTH

Avoid quick movements up/down or left/right, because they'll disrupt your balance and lessen the pressure on the trail, losing you valuable traction.

STAY CENTRED

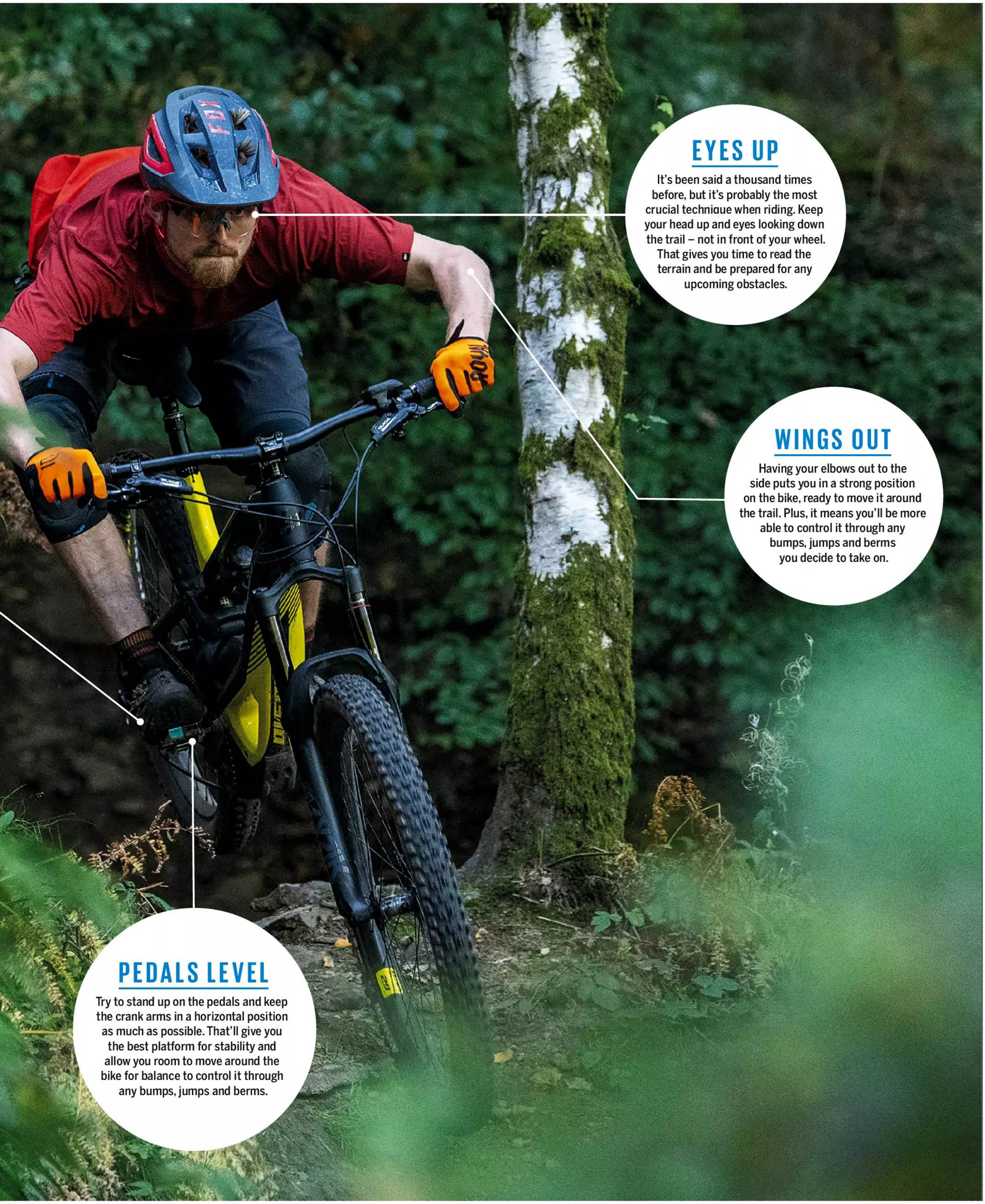
Don't lean forward onto the bar too heavily. This will impede your ability to lean the bike sideways and move it underneath you (a bike that's too long will also have this effect).

HIT THE TRAILS

Here are a few useful skills that'll increase your control and confidence when dropping into bike park trails.

HEELS DOWN

Dropping your heels and slightly bending your legs helps keep weight on your feet. This is important for grip and braking, and also means you're using the strongest muscles to support your weight.



EYES UP

It's been said a thousand times before, but it's probably the most crucial technique when riding. Keep your head up and eyes looking down the trail – not in front of your wheel. That gives you time to read the terrain and be prepared for any upcoming obstacles.

WINGS OUT

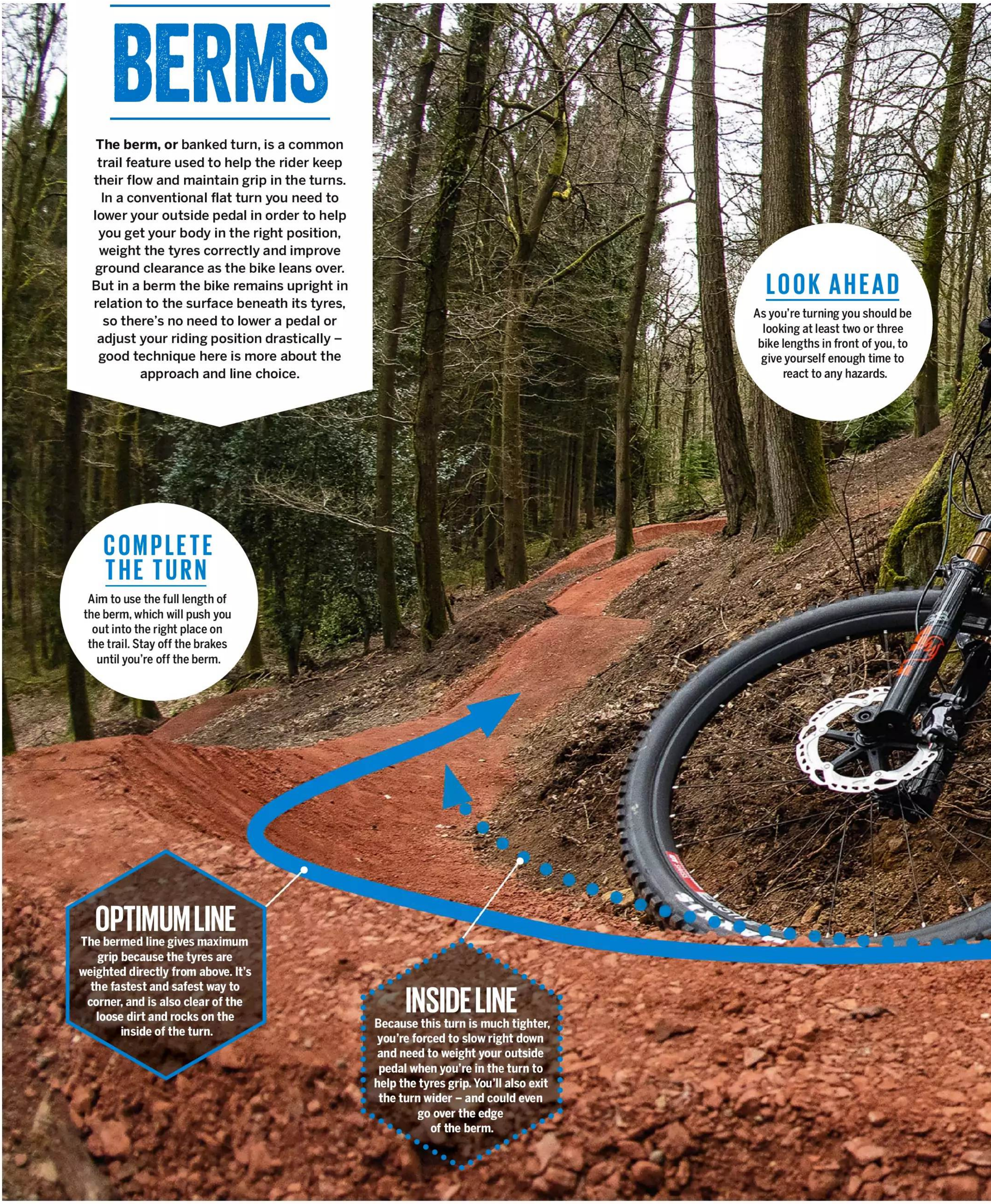
Having your elbows out to the side puts you in a strong position on the bike, ready to move it around the trail. Plus, it means you'll be more able to control it through any bumps, jumps and berms you decide to take on.

PEDALS LEVEL

Try to stand up on the pedals and keep the crank arms in a horizontal position as much as possible. That'll give you the best platform for stability and allow you room to move around the bike for balance to control it through any bumps, jumps and berms.

BERMS

The berm, or banked turn, is a common trail feature used to help the rider keep their flow and maintain grip in the turns. In a conventional flat turn you need to lower your outside pedal in order to help you get your body in the right position, weight the tyres correctly and improve ground clearance as the bike leans over. But in a berm the bike remains upright in relation to the surface beneath its tyres, so there's no need to lower a pedal or adjust your riding position drastically – good technique here is more about the approach and line choice.



LOOK AHEAD

As you're turning you should be looking at least two or three bike lengths in front of you, to give yourself enough time to react to any hazards.

COMPLETE THE TURN

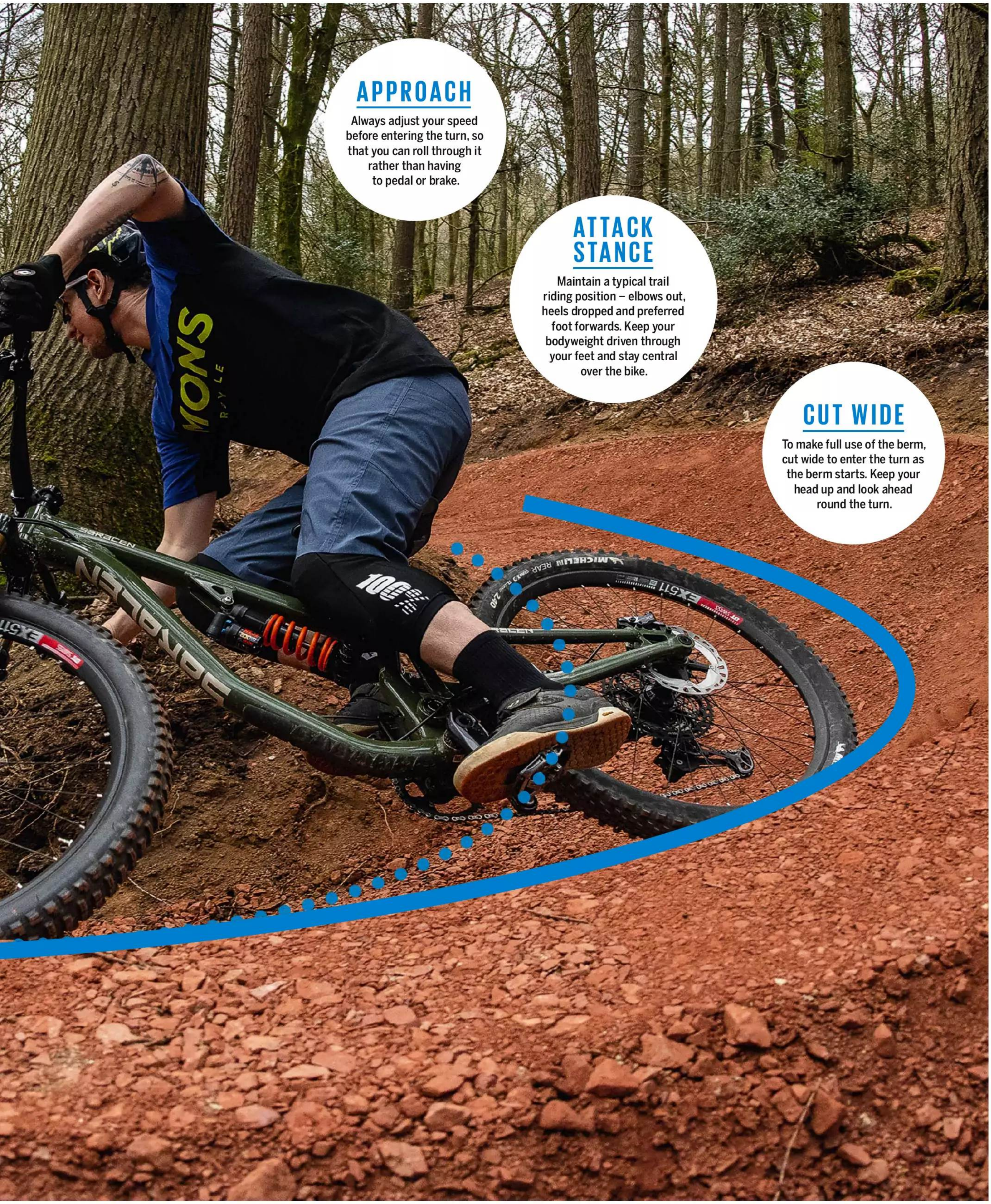
Aim to use the full length of the berm, which will push you out into the right place on the trail. Stay off the brakes until you're off the berm.

OPTIMUM LINE

The bermed line gives maximum grip because the tyres are weighted directly from above. It's the fastest and safest way to corner, and is also clear of the loose dirt and rocks on the inside of the turn.

INSIDE LINE

Because this turn is much tighter, you're forced to slow right down and need to weight your outside pedal when you're in the turn to help the tyres grip. You'll also exit the turn wider – and could even go over the edge of the berm.



APPROACH

Always adjust your speed before entering the turn, so that you can roll through it rather than having to pedal or brake.

ATTACK STANCE

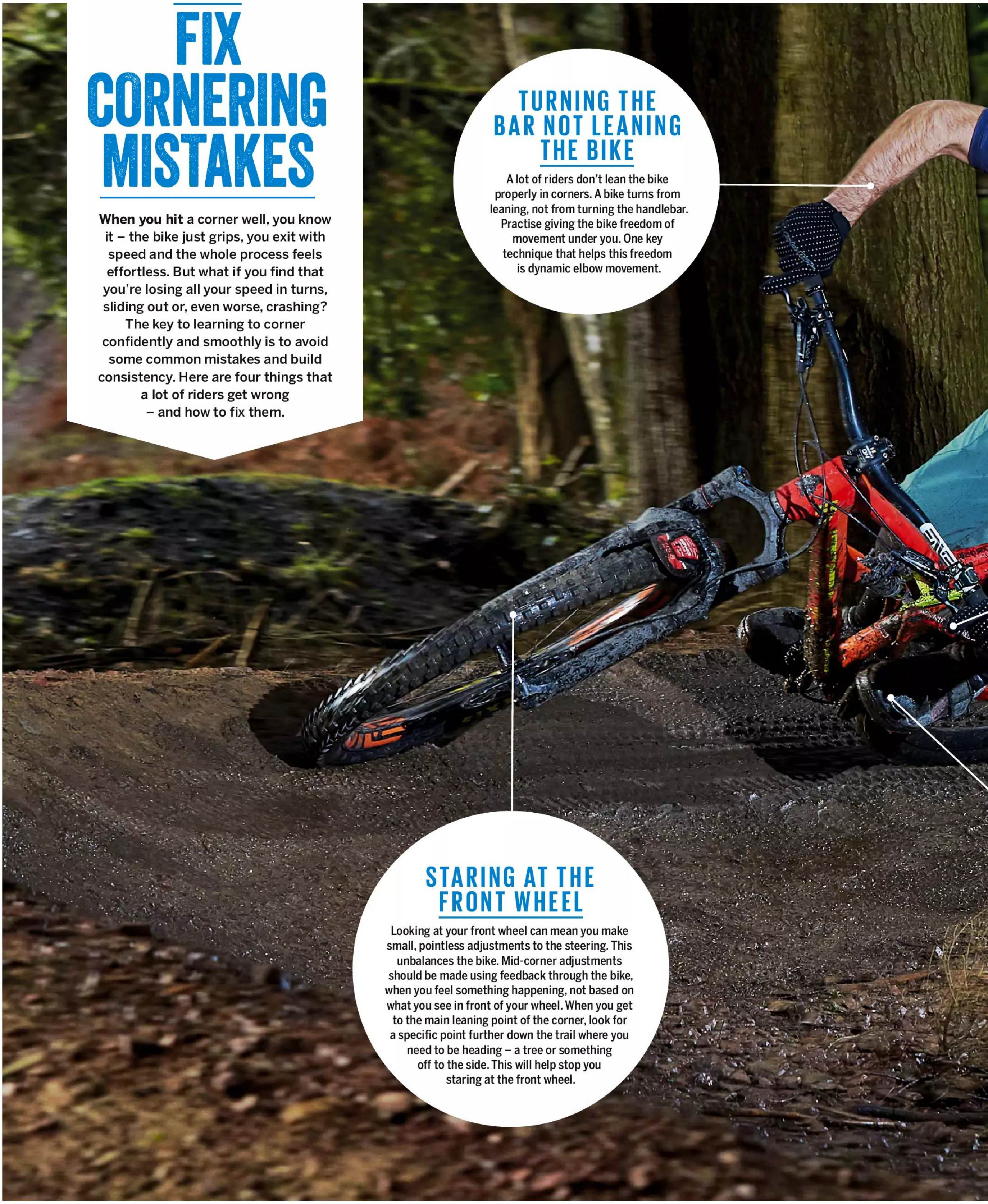
Maintain a typical trail riding position – elbows out, heels dropped and preferred foot forwards. Keep your bodyweight driven through your feet and stay central over the bike.

CUT WIDE

To make full use of the berm, cut wide to enter the turn as the berm starts. Keep your head up and look ahead round the turn.

FIX CORNERING MISTAKES

When you hit a corner well, you know it – the bike just grips, you exit with speed and the whole process feels effortless. But what if you find that you're losing all your speed in turns, sliding out or, even worse, crashing? The key to learning to corner confidently and smoothly is to avoid some common mistakes and build consistency. Here are four things that a lot of riders get wrong – and how to fix them.



TURNING THE BAR NOT LEANING THE BIKE

A lot of riders don't lean the bike properly in corners. A bike turns from leaning, not from turning the handlebar. Practise giving the bike freedom of movement under you. One key technique that helps this freedom is dynamic elbow movement.

STARING AT THE FRONT WHEEL

Looking at your front wheel can mean you make small, pointless adjustments to the steering. This unbalances the bike. Mid-corner adjustments should be made using feedback through the bike, when you feel something happening, not based on what you see in front of your wheel. When you get to the main leaning point of the corner, look for a specific point further down the trail where you need to be heading – a tree or something off to the side. This will help stop you staring at the front wheel.

BRAKING IN THE CORNER, NOT BEFORE IT

This one sounds obvious, but we all brake in the middle of corners too often. A good way to overcome this is to find a turn to practise on and use a marker to work out your braking point. Put the marker on the straight leading into the corner, a good distance back from it. Ride the corner. If you hit it confidently, move the marker closer to the turn and try again. If not, either try again or move the marker back a bit.

PEDALLING OUT OF THE CORNER

We're sure you've been there, chasing your mate who's a little bit faster than you. You start to pedal out of the corners to keep up, but they keep pulling away. That's because pedalling out of the corners unbalances the bike, reducing grip, and therefore speed. The best way to gain speed from a corner is to ride it correctly. Then you can add pedalling.

ADVANCED TIPS

We're huge believers in experimentation during skills practice and training. Here are three things you can play with to help you with your cornering

1.RIDE HEIGHT

Practise hitting the same turn repeatedly while adjusting how low you get your chest relative to the handlebar. Try really low (by bending your arms a lot), try really high, and experiment until you find the optimum position. Generally, a lower riding position should give you more front-end control, but find the right balance for you – and the corner you're riding.

2.PEDAL POSITION

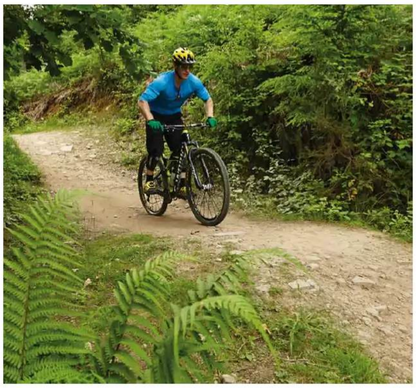
People often argue over whether you should have your outside pedal down or not when cornering. The answer is that it depends on the turn. Practise riding a variety of corners where you keep your cranks flat and outside foot down. You can also try adjusting how far down you have your outside foot. Figure out what gives you the most grip and stability.

3.PUMPING

Try pumping – extending your legs to push the bike into the corner – at different stages in the turn. After a bit of practice, you'll start to find the sweet spot and begin bouncing out of the corner. This is a more advanced skill, so build up to it slowly.

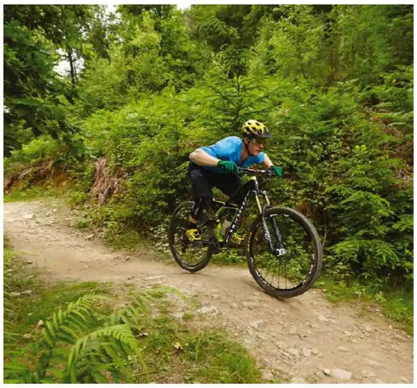
WHOOPS / ROLLERS

Whoops are smooth bumps in the trail that are great fun to ride and can even help you gain speed if you pump through them. At slow speeds they're rarely a problem because the impact forces aren't great enough to affect you. But at speed, if you stay sat down or get your timing wrong, they'll kick you all over the place. The main focus when riding whoops is to stay smooth and keep your bodyweight flowing forwards by absorbing the upslope and extending on the downslope. Try to stay relaxed and let the bike pivot and move underneath you by relaxing your arms.



1 APPROACH

Stand in your neutral position. For bigger whoops stand slightly taller than normal to create more room between you and the bike to absorb the bump. You've already seen the first whoop and you know what to expect, so look towards the next feature.

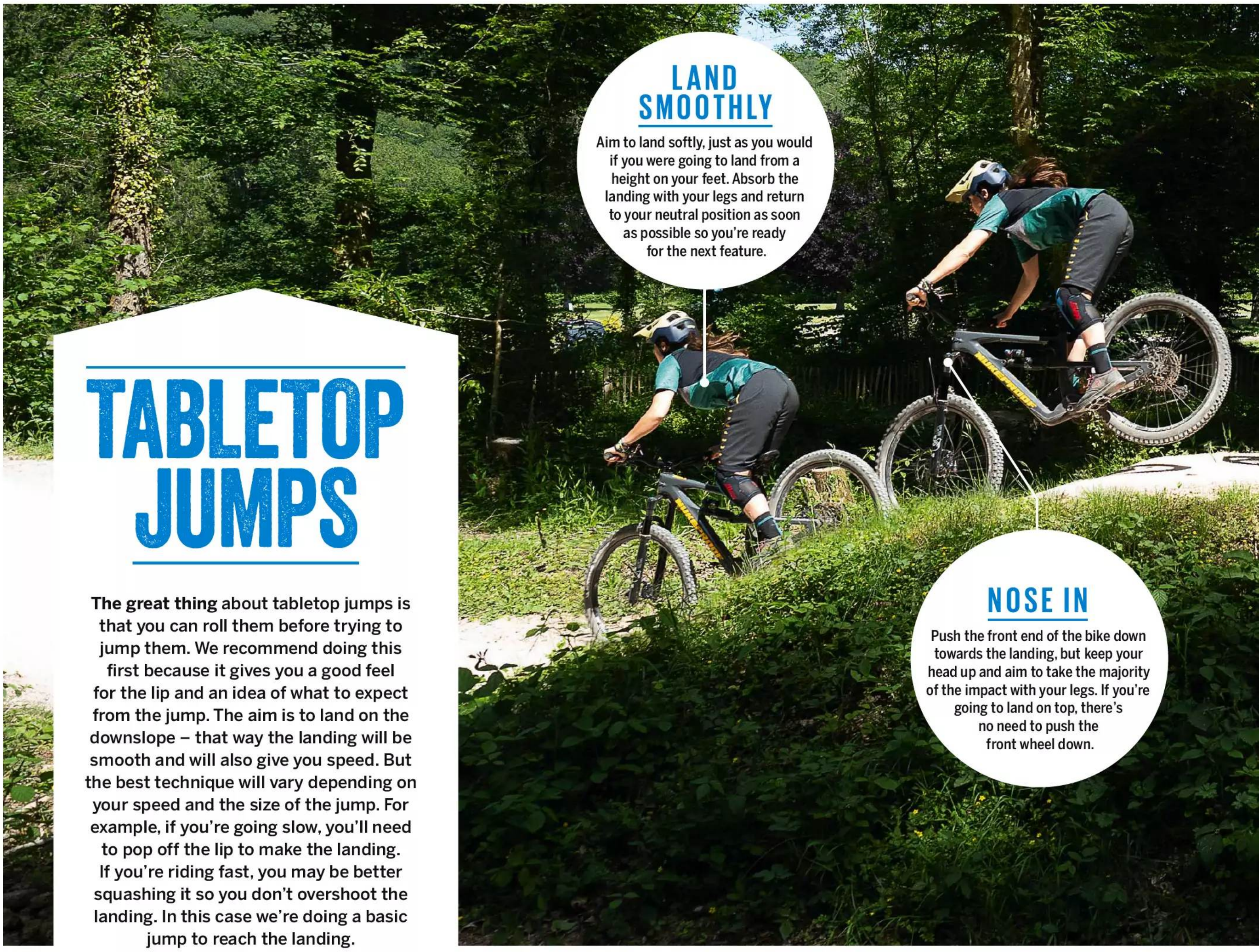


2 ABSORB

As the bike hits the upslope allow your legs and arms to bend so the bike comes up underneath you. To time this you have to feel it rather than use a visual reference. As you feel the bike go, load into the upslope – that's when you absorb. The bump will push the bike up underneath you so there's no need to try to pick it up.

TABLETOP JUMPS

The great thing about tabletop jumps is that you can roll them before trying to jump them. We recommend doing this first because it gives you a good feel for the lip and an idea of what to expect from the jump. The aim is to land on the downslope – that way the landing will be smooth and will also give you speed. But the best technique will vary depending on your speed and the size of the jump. For example, if you're going slow, you'll need to pop off the lip to make the landing. If you're riding fast, you may be better squashing it so you don't overshoot the landing. In this case we're doing a basic jump to reach the landing.

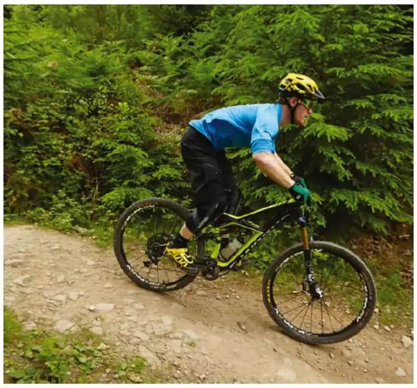


LAND SMOOTHLY

Aim to land softly, just as you would if you were going to land from a height on your feet. Absorb the landing with your legs and return to your neutral position as soon as possible so you're ready for the next feature.

NOSE IN

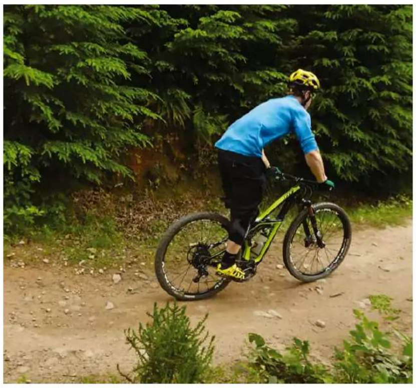
Push the front end of the bike down towards the landing, but keep your head up and aim to take the majority of the impact with your legs. If you're going to land on top, there's no need to push the front wheel down.



3

EXTEND

When your bike is over the top of the whoop, push it into the downslope using your legs as much as possible. Before trying to gain speed from pumping, your main focus is to stay smooth and in control for the next whoop. If you've timed it correctly you'll have picked up speed and you'll be feeling smooth.



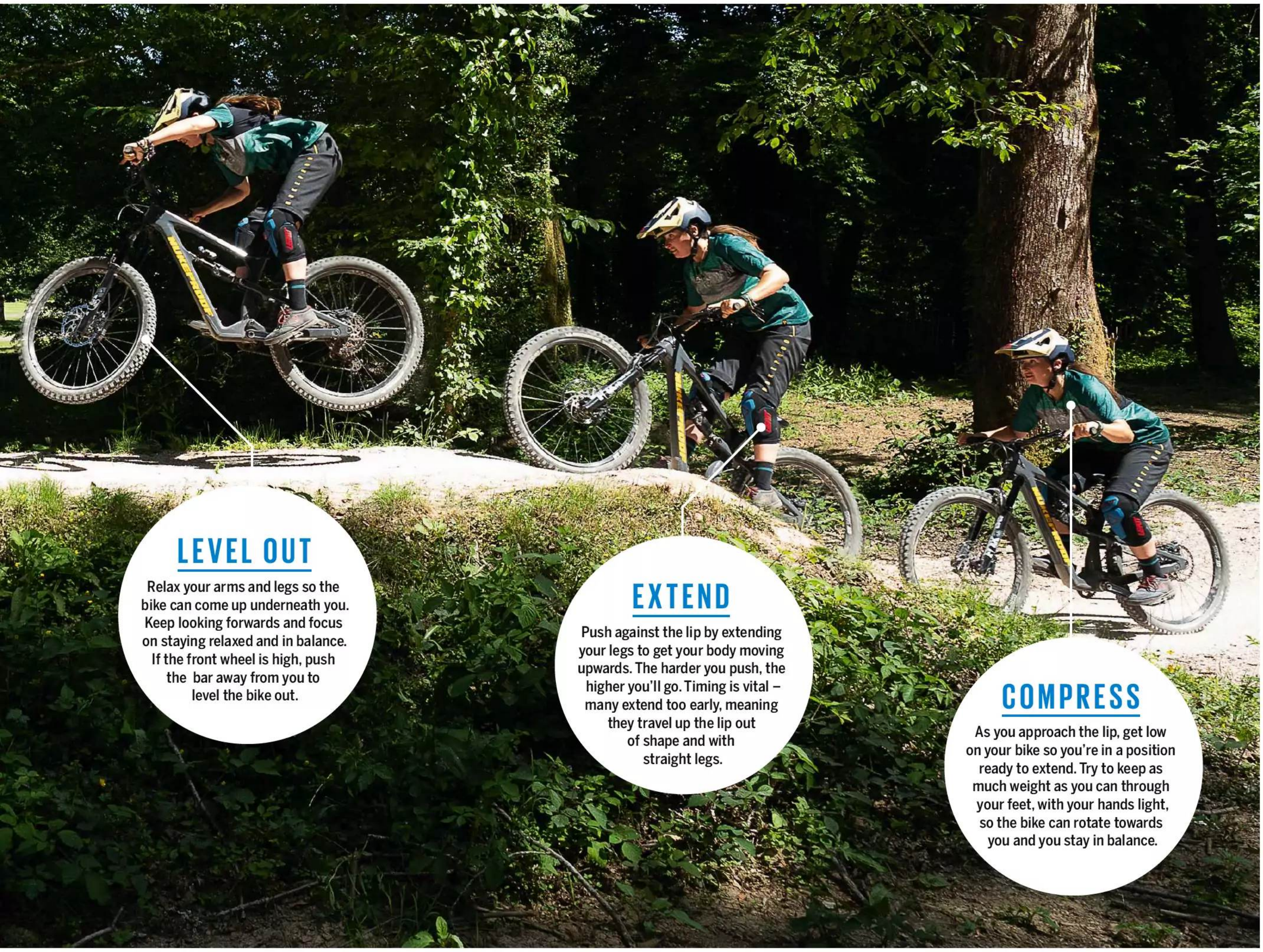
4

RESET

You won't have long between most whoops so focus on extending your legs and arms into a neutral position so you're ready to repeat the sequence of absorb and extend again.

PUMP IT

If you can stay smooth through whoops then you can gain extra speed without pedalling by pumping them. Try to be as light as possible over the speed-sapping upslope, then push hard with your legs to generate forward speed on the downslope.



LEVEL OUT

Relax your arms and legs so the bike can come up underneath you. Keep looking forwards and focus on staying relaxed and in balance. If the front wheel is high, push the bar away from you to level the bike out.

EXTEND

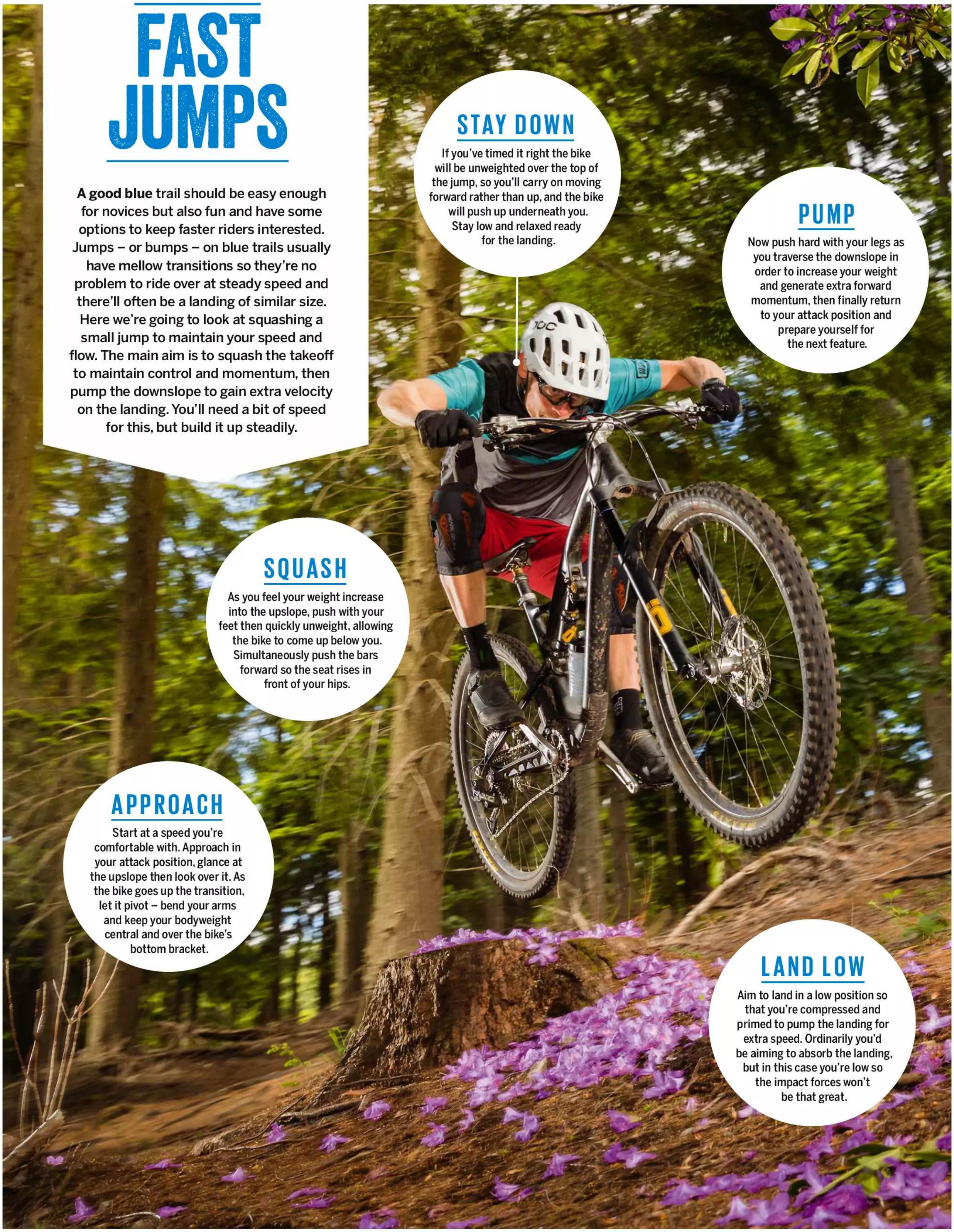
Push against the lip by extending your legs to get your body moving upwards. The harder you push, the higher you'll go. Timing is vital – many extend too early, meaning they travel up the lip out of shape and with straight legs.

COMPRESS

As you approach the lip, get low on your bike so you're in a position ready to extend. Try to keep as much weight as you can through your feet, with your hands light, so the bike can rotate towards you and you stay in balance.

FAST JUMPS

A good blue trail should be easy enough for novices but also fun and have some options to keep faster riders interested. Jumps – or bumps – on blue trails usually have mellow transitions so they're no problem to ride over at steady speed and there'll often be a landing of similar size. Here we're going to look at squashing a small jump to maintain your speed and flow. The main aim is to squash the takeoff to maintain control and momentum, then pump the downslope to gain extra velocity on the landing. You'll need a bit of speed for this, but build it up steadily.



APPROACH

Start at a speed you're comfortable with. Approach in your attack position, glance at the upslope then look over it. As the bike goes up the transition, let it pivot – bend your arms and keep your bodyweight central and over the bike's bottom bracket.

SQUASH

As you feel your weight increase into the upslope, push with your feet then quickly unweight, allowing the bike to come up below you. Simultaneously push the bars forward so the seat rises in front of your hips.

STAY DOWN

If you've timed it right the bike will be unweighted over the top of the jump, so you'll carry on moving forward rather than up, and the bike will push up underneath you. Stay low and relaxed ready for the landing.

PUMP

Now push hard with your legs as you traverse the downslope in order to increase your weight and generate extra forward momentum, then finally return to your attack position and prepare yourself for the next feature.

LAND LOW

Aim to land in a low position so that you're compressed and primed to pump the landing for extra speed. Ordinarily you'd be aiming to absorb the landing, but in this case you're low so the impact forces won't be that great.

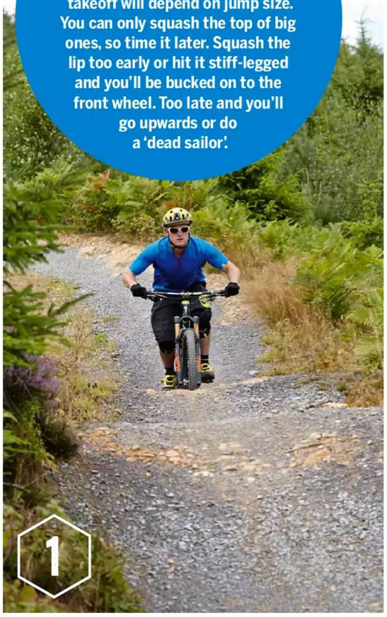
PUMP BUMPS

Pump bumps are small rollers that can be a single lump or a series of undulations. What makes them different from jumps is that they're generally on sections of trail that are quite slow, so it's better to pump them to gain speed rather than try to jump them.

Pumping is a way of generating speed from the trail without pedalling. It's a simple concept – apply pressure to a downslope and you'll gain forwards momentum. At steady speeds you can pump small bumps with both wheels on the ground, but at faster speeds it can be better to let the front wheel come off the ground (a move known as a 'manual') and pump with the rear wheel only.

ALL IN THE TIMING

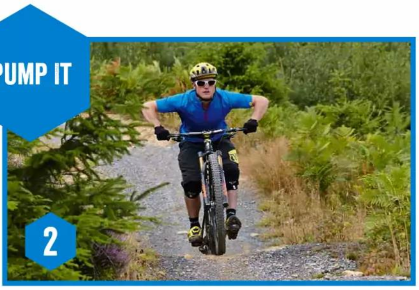
The stage at which you squash a takeoff will depend on jump size. You can only squash the top of big ones, so time it later. Squash the lip too early or hit it stiff-legged and you'll be bucked on to the front wheel. Too late and you'll go upwards or do a 'dead sailor'.



APPROACH

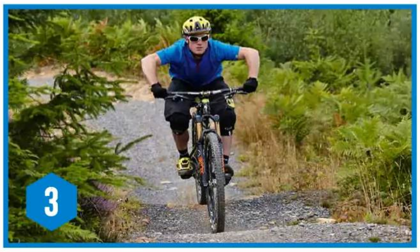
You should be in your neutral position, with your weight through your feet and your hands light. A bit of speed will help, but keep it under control. Spot the upslope so you can work out your timing, then look down the trail, covering both brakes.

PUMP IT



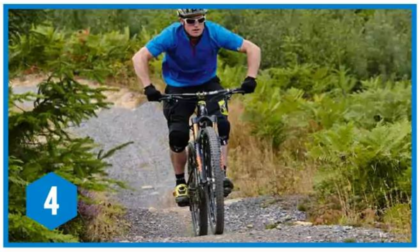
ABSORB

Just before the front wheel hits the upslope, compress the bike into the ground and bend your arms and legs so the bike can change angle and is light on the upslope.



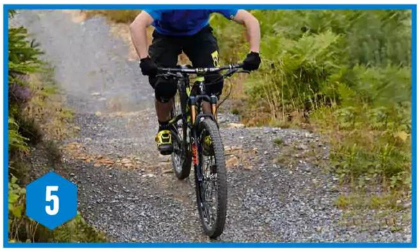
PUMP

You'll now be in a compressed position on top of the first bump. Just as your rear wheel clears the upslope, push with your legs to pump the downslope. Timing is essential here.



ABSORB

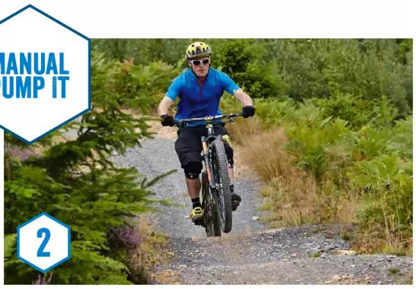
If you're tackling a series of bumps, allow your legs and arms to bend again so you can absorb the upslope of the next bump. You'll know if your timing is out because you'll lose speed.



PUMP

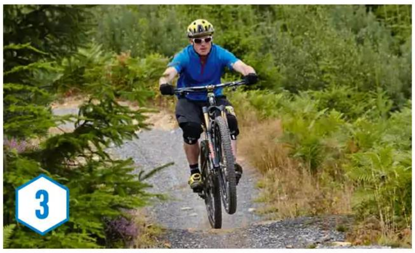
Push hard with your legs into the downslope to generate as much speed as you can. Using your legs as much as possible will help you to generate better power.

MANUAL PUMP IT



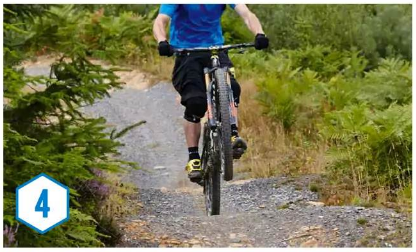
MANUAL

As the front wheel reaches the bottom of the upslope, compress the front of the bike and push it forwards to lift the wheel off the ground. The aim is to avoid the wheel touching the ground until you're over the top of the bump.



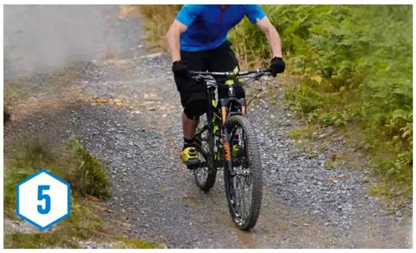
ABSORB

With the front wheel clear of the upslope and in the air, and your arms extended, you now need to absorb the upslope with the rear wheel. Allow your knees to bend as you feel the rear wheel roll up the upslope.



PUMP

Just as the rear wheel clears the upslope, push down with your feet on to the downslope while still holding the front wheel up. Transferring your weight on to the rear wheel and downslope will increase your speed.

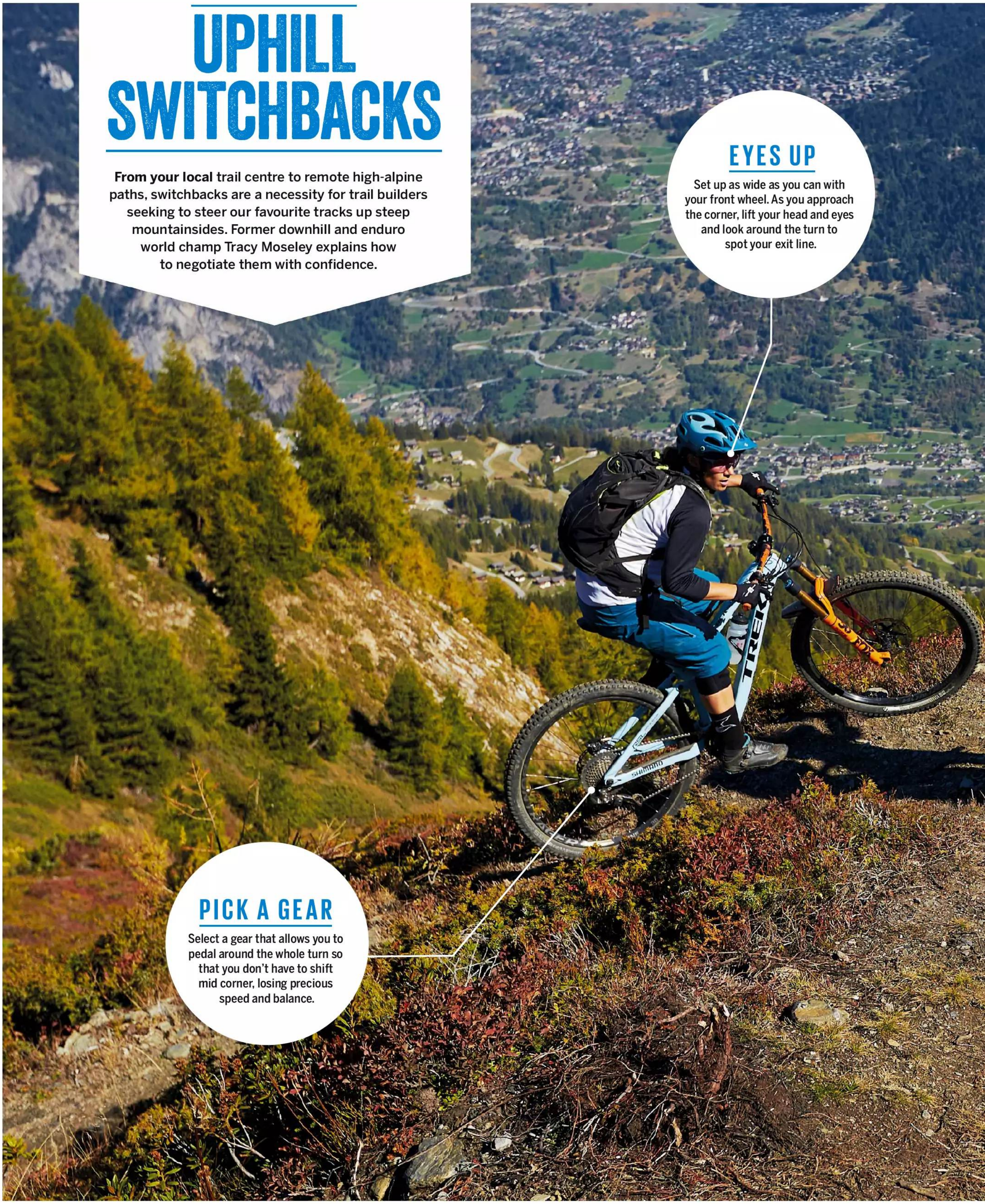


ABSORB

As the rear wheel reaches the next upslope, allow it to come up between your legs and the bike to level out, then repeat steps 2-4. When you reach the final downslope, let the front wheel drop and, if there's space, pump for extra speed.

UPHILL SWITCHBACKS

From your local trail centre to remote high-alpine paths, switchbacks are a necessity for trail builders seeking to steer our favourite tracks up steep mountainsides. Former downhill and enduro world champ Tracy Moseley explains how to negotiate them with confidence.

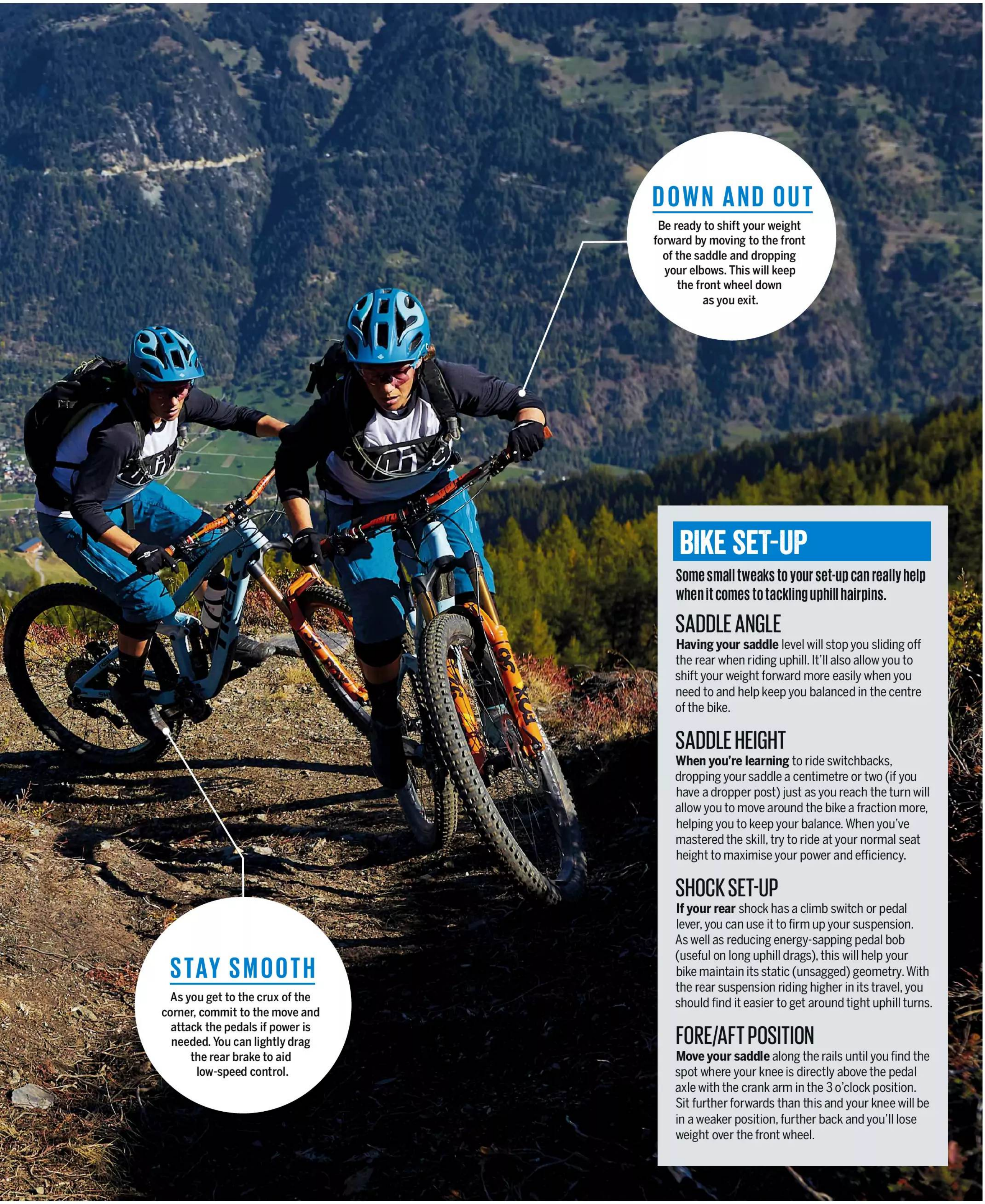


EYES UP

Set up as wide as you can with your front wheel. As you approach the corner, lift your head and eyes and look around the turn to spot your exit line.

PICK A GEAR

Select a gear that allows you to pedal around the whole turn so that you don't have to shift mid corner, losing precious speed and balance.



DOWN AND OUT

Be ready to shift your weight forward by moving to the front of the saddle and dropping your elbows. This will keep the front wheel down as you exit.

STAY SMOOTH

As you get to the crux of the corner, commit to the move and attack the pedals if power is needed. You can lightly drag the rear brake to aid low-speed control.

BIKE SET-UP

Some small tweaks to your set-up can really help when it comes to tackling uphill hairpins.

SADDLE ANGLE

Having your saddle level will stop you sliding off the rear when riding uphill. It'll also allow you to shift your weight forward more easily when you need to and help keep you balanced in the centre of the bike.

SADDLE HEIGHT

When you're learning to ride switchbacks, dropping your saddle a centimetre or two (if you have a dropper post) just as you reach the turn will allow you to move around the bike a fraction more, helping you to keep your balance. When you've mastered the skill, try to ride at your normal seat height to maximise your power and efficiency.

SHOCK SET-UP

If your rear shock has a climb switch or pedal lever, you can use it to firm up your suspension. As well as reducing energy-sapping pedal bob (useful on long uphill drags), this will help your bike maintain its static (unsagged) geometry. With the rear suspension riding higher in its travel, you should find it easier to get around tight uphill turns.

FORE/AFT POSITION

Move your saddle along the rails until you find the spot where your knee is directly above the pedal axle with the crank arm in the 3 o'clock position. Sit further forwards than this and your knee will be in a weaker position, further back and you'll lose weight over the front wheel.

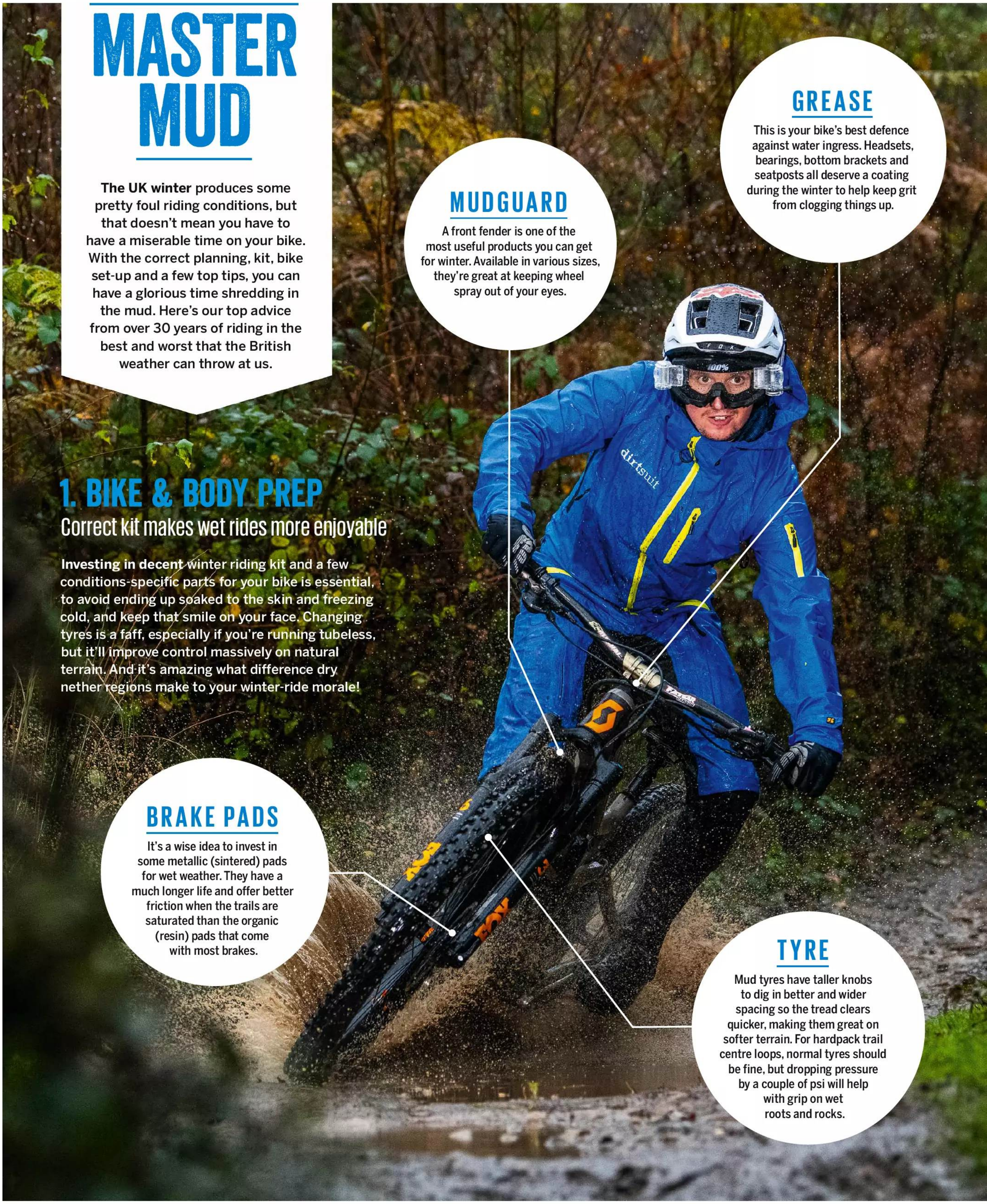
MASTER MUD

The UK winter produces some pretty foul riding conditions, but that doesn't mean you have to have a miserable time on your bike. With the correct planning, kit, bike set-up and a few top tips, you can have a glorious time shredding in the mud. Here's our top advice from over 30 years of riding in the best and worst that the British weather can throw at us.

1. BIKE & BODY PREP

Correct kit makes wet rides more enjoyable

Investing in decent winter riding kit and a few conditions-specific parts for your bike is essential, to avoid ending up soaked to the skin and freezing cold, and keep that smile on your face. Changing tyres is a faff, especially if you're running tubeless, but it'll improve control massively on natural terrain. And it's amazing what difference dry nether regions make to your winter-ride morale!



GREASE

This is your bike's best defence against water ingress. Headsets, bearings, bottom brackets and seatposts all deserve a coating during the winter to help keep grit from clogging things up.

MUDGUARD

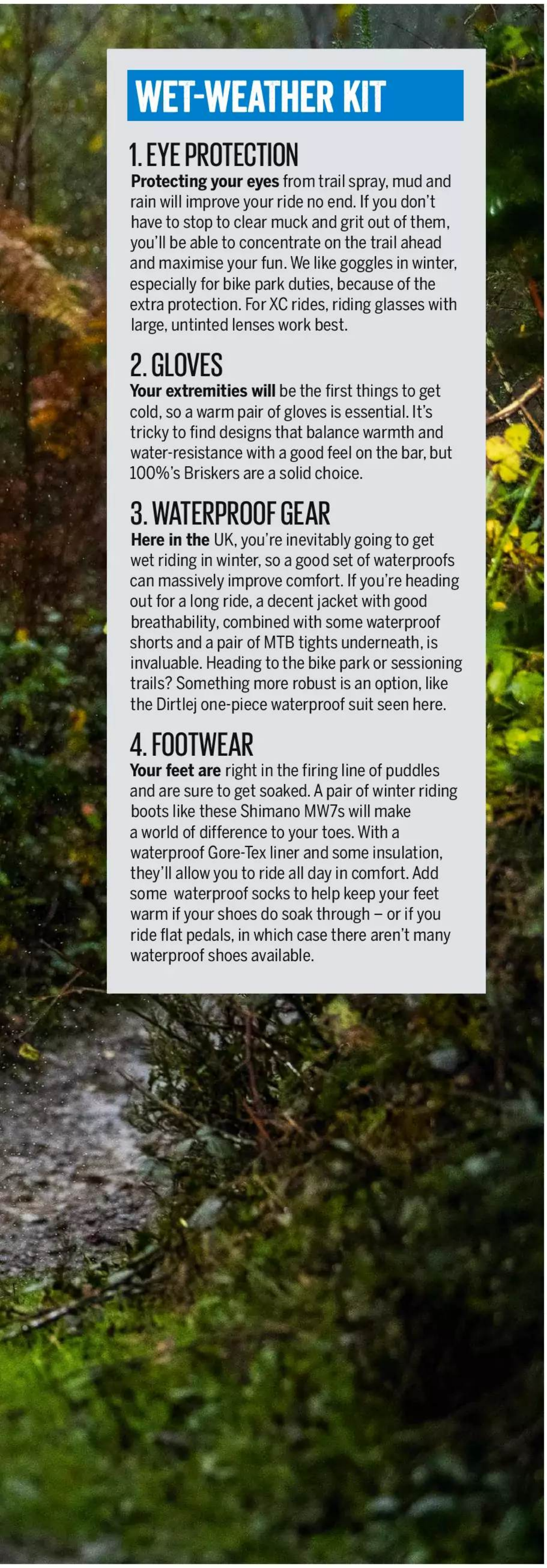
A front fender is one of the most useful products you can get for winter. Available in various sizes, they're great at keeping wheel spray out of your eyes.

BRAKE PADS

It's a wise idea to invest in some metallic (sintered) pads for wet weather. They have a much longer life and offer better friction when the trails are saturated than the organic (resin) pads that come with most brakes.

TYRE

Mud tyres have taller knobs to dig in better and wider spacing so the tread clears quicker, making them great on softer terrain. For hardpack trail centre loops, normal tyres should be fine, but dropping pressure by a couple of psi will help with grip on wet roots and rocks.



WET-WEATHER KIT

1. EYE PROTECTION

Protecting your eyes from trail spray, mud and rain will improve your ride no end. If you don't have to stop to clear muck and grit out of them, you'll be able to concentrate on the trail ahead and maximise your fun. We like goggles in winter, especially for bike park duties, because of the extra protection. For XC rides, riding glasses with large, untinted lenses work best.

2. GLOVES

Your extremities will be the first things to get cold, so a warm pair of gloves is essential. It's tricky to find designs that balance warmth and water-resistance with a good feel on the bar, but 100%'s Briskers are a solid choice.

3. WATERPROOF GEAR

Here in the UK, you're inevitably going to get wet riding in winter, so a good set of waterproofs can massively improve comfort. If you're heading out for a long ride, a decent jacket with good breathability, combined with some waterproof shorts and a pair of MTB tights underneath, is invaluable. Heading to the bike park or sessioning trails? Something more robust is an option, like the Dirtlej one-piece waterproof suit seen here.

4. FOOTWEAR

Your feet are right in the firing line of puddles and are sure to get soaked. A pair of winter riding boots like these Shimano MW7s will make a world of difference to your toes. With a waterproof Gore-Tex liner and some insulation, they'll allow you to ride all day in comfort. Add some waterproof socks to help keep your feet warm if your shoes do soak through – or if you ride flat pedals, in which case there aren't many waterproof shoes available.

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COLD-WEATHER KIT

1 NECK/HEAD WARMERS

Cold wind can nip at your ears and blow down your collar, so it's a good idea to protect these parts with Buff-style neck tubes, which can also be folded up to form a headband. When the mercury really plummets, an under-helmet skullcap can be a lifesaver.

2 THERMAL OUTERWEAR

This is the kit that's going to keep the wind and the chill out. When it's not wet, softshell materials offer more breathability and comfort than full-on waterproofs. We like riding in trousers when it's cold, and a jacket with wind protection is a must. Fox's Fire range has some good options.

3 BASELAYERS

You can add or remove clothing to suit the conditions, but your baselayer stays put, so it's essential to ensure you have a decent one. Merino wool is good for staying warm when wet, but it isn't as breathable as some synthetic materials, so it's more likely to become damp in the first place.

4 GILET

Sleeveless vests are great for getting your core up to the right temperature, while not being as hot or bulky as a full jacket, and also allowing free movement of your arms. Stuff one in your pack for emergencies or to sling on for long descents.

2. TAMING WET TRAILS

How to surf the sludge without eating it

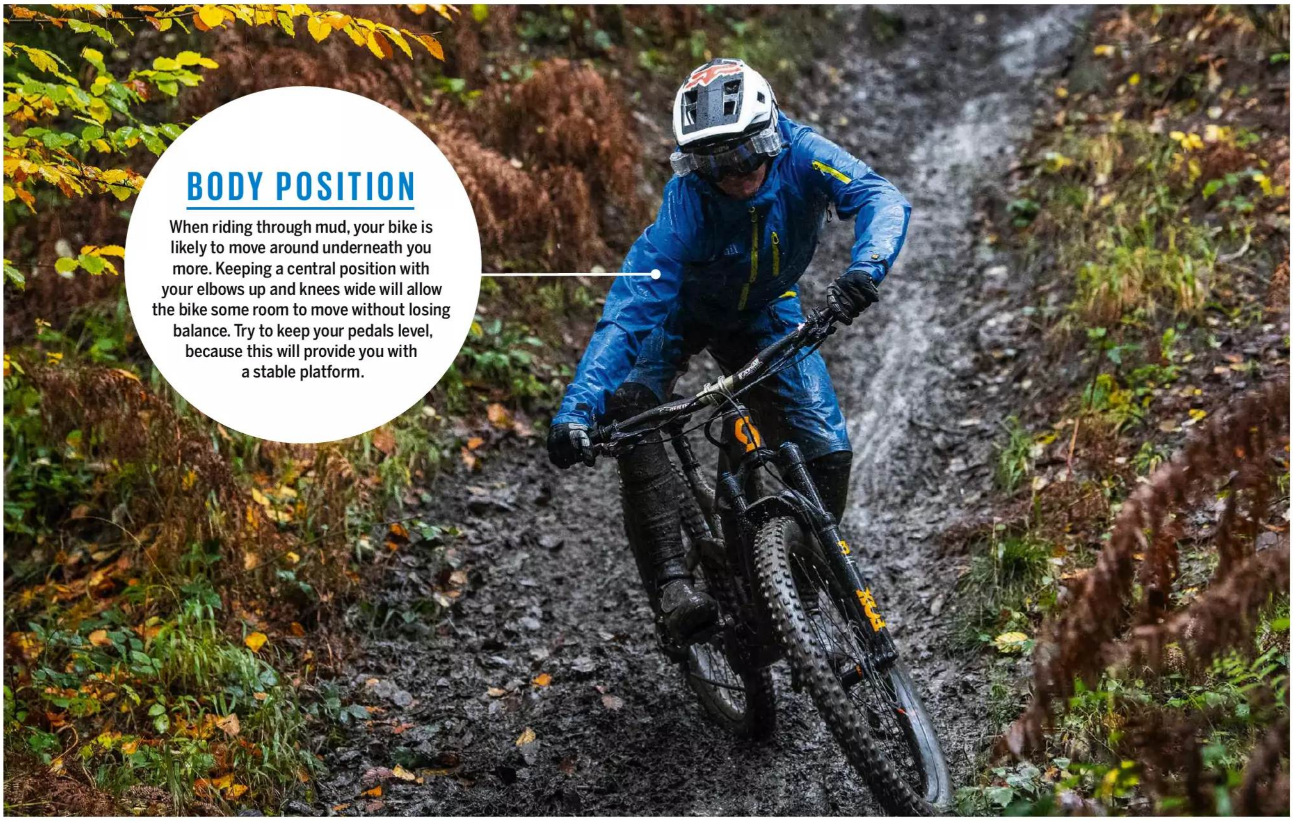
Mountain biking in wet conditions requires a different approach to riding dry trails, but if you master a few useful skills you can thrash through the mud and come out smiling, rather than ending up with your face in the dirt. Your biggest asset is your attitude. If you're willing to have some fun and not take things too seriously, riding in the wet can be the best time ever.

PEDALLING

You need to be a little more careful with your pedal strokes in the mud, because sharp, hard stamps can make the back wheel slip. Stay seated for maximum rear-wheel grip and use a lower cadence with smooth strokes. This is the best way to stop the tyres spinning out and keep you moving forward. Torque is better than power. It's also an idea to look for drier lines, often found on the edge of trails.

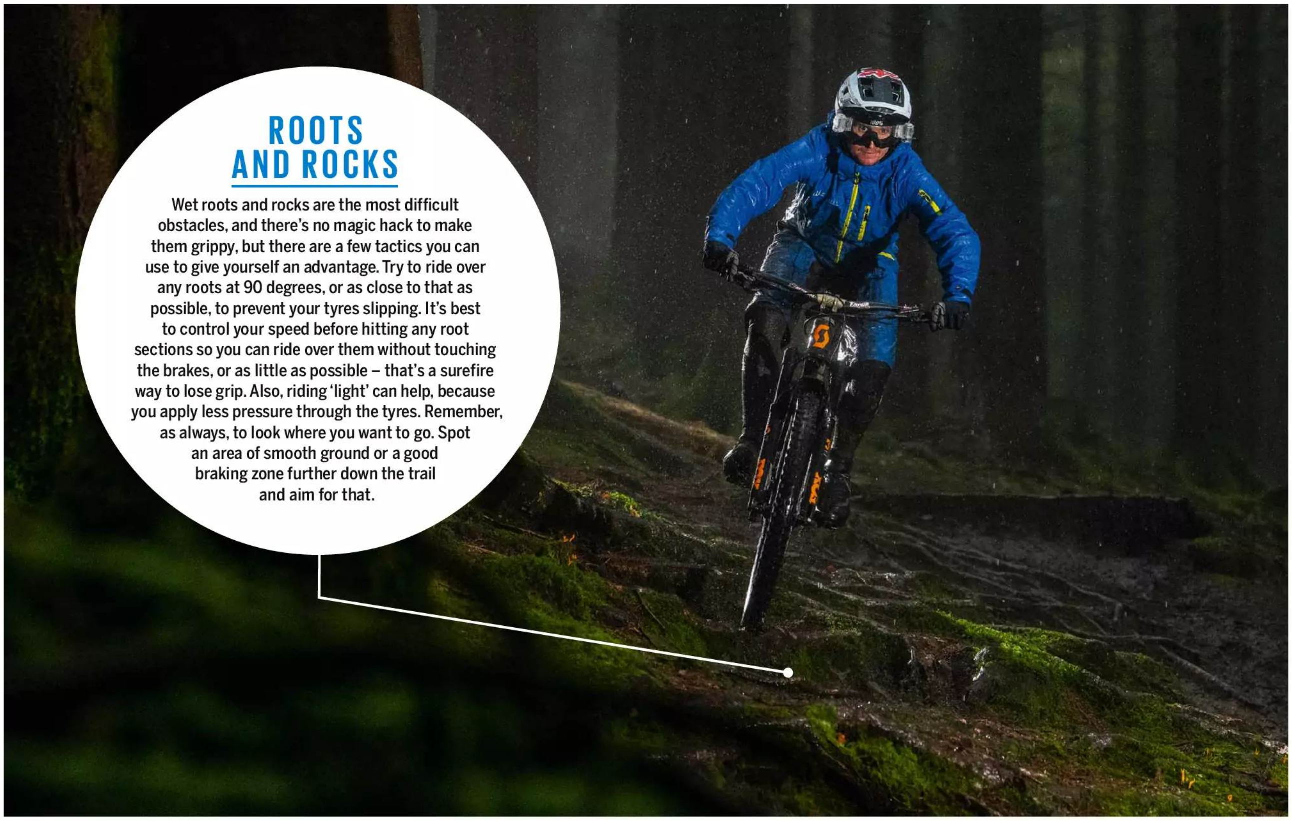
BRAKING

The first thing to remember is that your brakes are unlikely to be as sharp or powerful in the wet. It'll take a split second for the pads to remove any mud and water on your rotors, and chances are that both the pads and discs will be colder, reducing the friction between them, and therefore the stopping power. Plus, your tyres won't deliver as much braking grip in the slop, or steer as well. So, it's wise to get your braking done early, especially before turns. Also, don't brake too sharply because it's likely to lock up the wheels and make you skid (unless you want to, of course!).



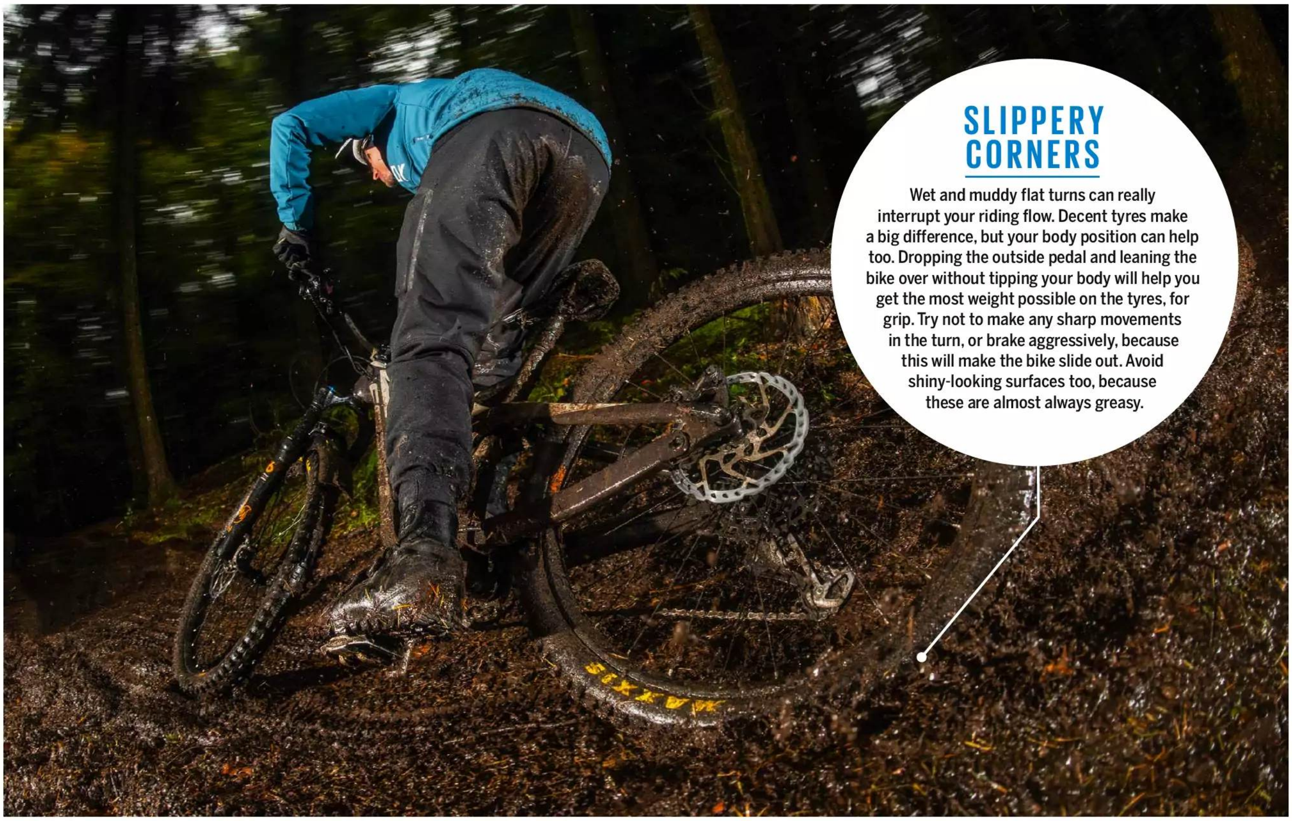
BODY POSITION

When riding through mud, your bike is likely to move around underneath you more. Keeping a central position with your elbows up and knees wide will allow the bike some room to move without losing balance. Try to keep your pedals level, because this will provide you with a stable platform.



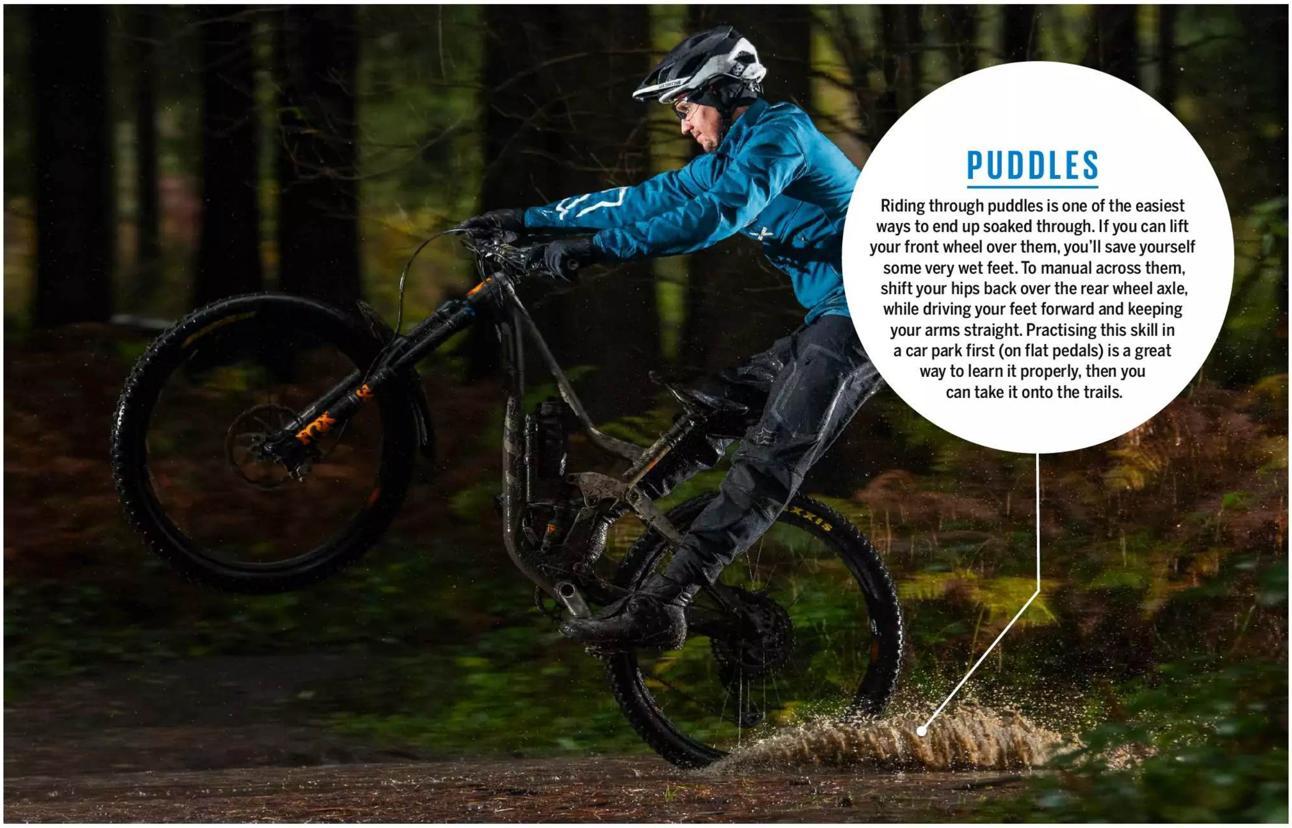
ROOTS AND ROCKS

Wet roots and rocks are the most difficult obstacles, and there's no magic hack to make them grippy, but there are a few tactics you can use to give yourself an advantage. Try to ride over any roots at 90 degrees, or as close to that as possible, to prevent your tyres slipping. It's best to control your speed before hitting any root sections so you can ride over them without touching the brakes, or as little as possible – that's a surefire way to lose grip. Also, riding 'light' can help, because you apply less pressure through the tyres. Remember, as always, to look where you want to go. Spot an area of smooth ground or a good braking zone further down the trail and aim for that.



SLIPPERY CORNERS

Wet and muddy flat turns can really interrupt your riding flow. Decent tyres make a big difference, but your body position can help too. Dropping the outside pedal and leaning the bike over without tipping your body will help you get the most weight possible on the tyres, for grip. Try not to make any sharp movements in the turn, or brake aggressively, because this will make the bike slide out. Avoid shiny-looking surfaces too, because these are almost always greasy.



PUDDLES

Riding through puddles is one of the easiest ways to end up soaked through. If you can lift your front wheel over them, you'll save yourself some very wet feet. To manual across them, shift your hips back over the rear wheel axle, while driving your feet forward and keeping your arms straight. Practising this skill in a car park first (on flat pedals) is a great way to learn it properly, then you can take it onto the trails.

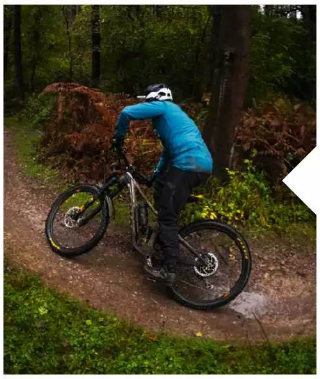
3. WHERE TO RIDE

Pros and cons of different locations

The UK is a fantastic place for riding bikes, with a huge variety of trails where you can test your skills throughout winter. But what sort of riding are you likely to encounter? And what are the positives and negatives of these different places?

NATURAL TRAILS

These are the ones that provide the most mud, challenge – and potential fun. Expect the riding to be slower and more technical, but with some practice these trails will improve your skills massively. You'll not likely get as wet as you would at a trail centre, but you'll definitely get muddier. Often there aren't any facilities near local spots, but the Forest of Dean, for example, has some great natural trails right by its trail centre cafe.



TRAIL CENTRES

Trail centres are great for getting out in winter. Their all-conditions surfaces allow you to pretty much have as much grip in the wet as in the dry – sometimes more. You don't need special tyres, and there's often a cafe, toilets and showers so you can warm up and change into dry clothes before heading home. You'll get wet, because the rocky surfaces absorb very little water. Mud will be limited though, and you can ride for as long as you can stay warm.

BIKE PARKS

Winter riding with an uplift can be a great mood booster – climbing into a warm, dry uplift truck as soon as you reach the bottom feels great. Plus, these venues have trails to suit all abilities and you know they'll be well-maintained. Depending on which bike park you choose, you can find either manmade or more natural trails, so you'll probably still get wet and/or muddy. As with trail centres, the facilities make it easier to stay out all day, but it's going to cost you.

BEAT YOUR TRAIL NEMESIS

Overcoming a fear of certain types of trail features is a skill in itself. If achieved successfully, it can make riding loads more fun and progressive while also keeping you safe. The trick is to be brave but not stupid. You could look at it like a boxing match – if there's a person who's been learning for 10 times as long as you and is twice your size, you wouldn't step into the ring with them. But if they're only a little more experienced and of a similar weight, then you could consider taking them on. There will be fear, yes, but by using the techniques here, you can find a way to overcome it. You can also use the boxing analogy to keep yourself safe – try to work on features that are realistic instead of just sending the biggest jump or drop-off straight away.

WHERE DOES FEAR COME FROM?

When speaking about fear, we have to start with where it comes from – the unknown. Think about that for a minute. When you're scared of something, it's only because you don't know what the outcome will be. Plus, fear comes out in, or is shown by, people in a heightened state of emotion. Realising these two things is a great step towards helping you manage fear and overcome a feature.

REDUCE THE UNKNOWN

So, you've identified the feature you want to get over. Let's say it's a drop-off you've never done before. The first challenge is to reduce the amount of 'unknown' in the situation. Think about what the 'unknowns' are to you – the technique needed, the feeling of being in the air that long, how it'll feel when you land, and so on. Then, turn these 'unknowns' into 'knowns' by doing two things. First, get yourself totally confident on smaller drops so you're riding them without having to consciously think about what you're doing. Second, visualise yourself hitting the bigger drop. This is what all top athletes will do before they ride something difficult. Picture all aspects of the drop, from getting on the bike to rolling in, dropping off, landing and the feeling of completing it.

MANAGE YOUR EMOTIONS

You've reduced the unknown through practising drops and visualising how this big feature will ride, but emotions are still running high. This is to be expected, so now is the time to start managing them. One trick here is to try to move your thinking from 'emotional' to 'practical', because emotional thinking doesn't get you very far when it comes to ticking off a feature for the first time. Move to practical by considering one or two key things you need to do, but don't make them too technical. For drops, it might be 'move late'. This approach – using a couple of words as a reminder – is called a mental cue.

DECIDE EARLY

This is probably the most helpful tip when it comes to nailing a feature for the first time. Don't wait for the start of the run-in to decide whether or not you're going to do it. Make that decision way earlier than that. For example, take a good look at the feature, have a test run-in to feel the speed, then look at the feature again and complete your visualisation. At this point, you can decide whetheror not to do it, then, if appropriate, push back to the start. As you get to the start, your mind will try to get you to change course, but you've already decided what you're doing, you've done your process, so you can go ahead and drop in.

THE PROCESS

1. Practise on smaller, similar features
2. Test the run-in
3. Visualise the drop
4. Think practically by using a mental cue
5. Decide before you're at the top

IN SUMMARY

First, find a feature that pushes you a little bit out of your comfort zone. Once you have the goal in mind, go and practise a smaller version of it to develop your technique. Then, do a planned test run-in to help you visualise the process. This is a safe way to practise for the feature in your head (stay positive throughout your visualisation). Lastly, you just need your practical mental cue before making the final decision to drop in or walk/ride away. Play around with this process, as a variation will work for you.

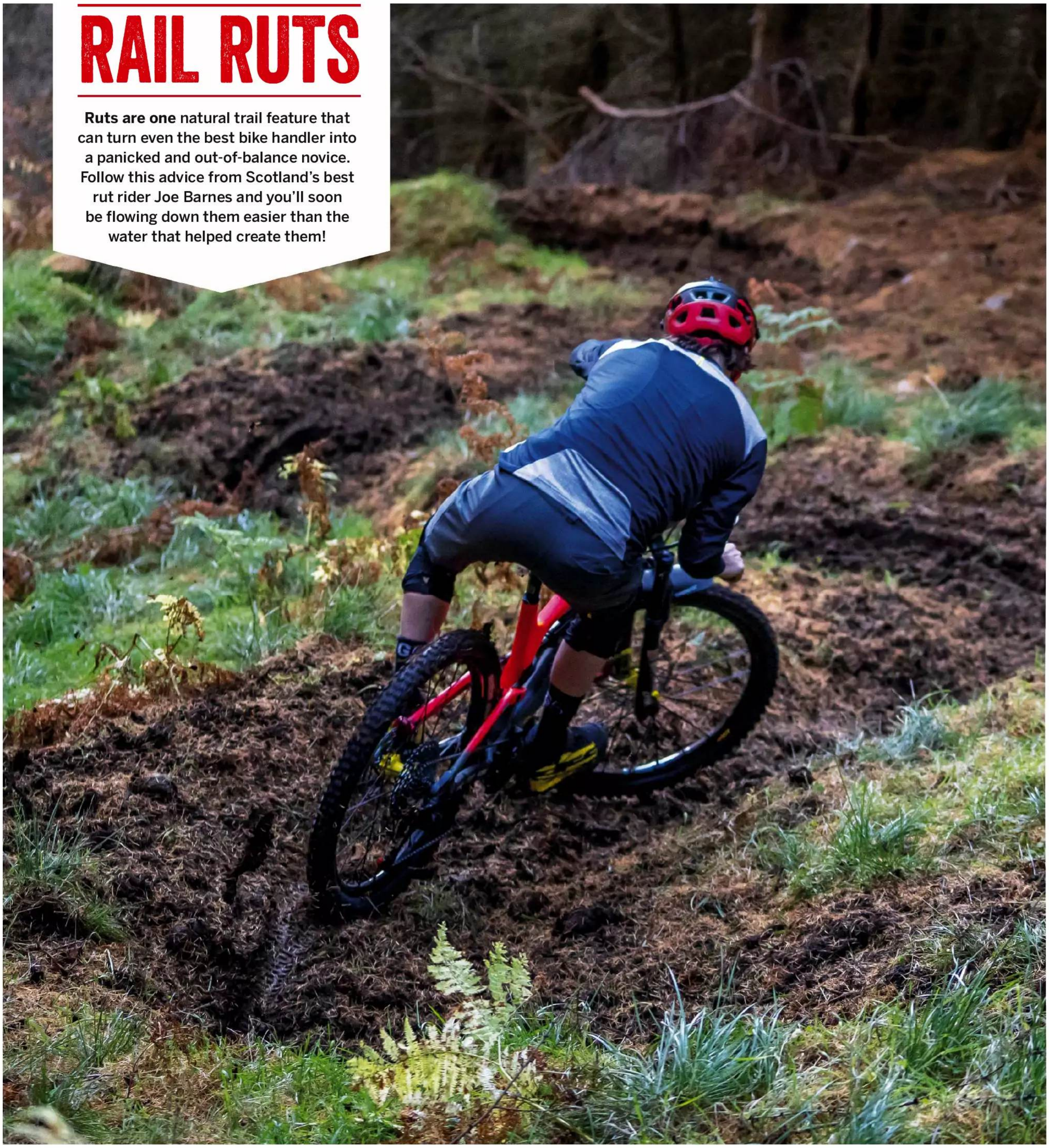
RED

Time to step it up and attack those red runs

TRAIL SKILLS

RAIL RUTS

Ruts are one natural trail feature that can turn even the best bike handler into a panicked and out-of-balance novice. Follow this advice from Scotland's best rut rider Joe Barnes and you'll soon be flowing down them easier than the water that helped create them!



1 STAY LOOSE

Let the bike move around beneath you. Unlike normal riding, where you try to ride with a solid position on the bike, in ruts you need to constantly move and balance with the bike. If the bike moves left, then you move to the right to keep it upright.

2 PEDALS LEVEL

It's important to ride with your feet fairly level. This gives you space to dip from side to side more easily and stops your feet hitting the edges of the ruts.

3 EASY ANCHORS

No sudden braking. Hard braking will cause the bike to get dragged into the edge of the rut and you'll lose balance. Use a bit more rear than front brake and feather them as you go to keep control and balance. A handy tip for this is to run your brakes with more lever travel so they're less grabby.

4 LOOK AHEAD

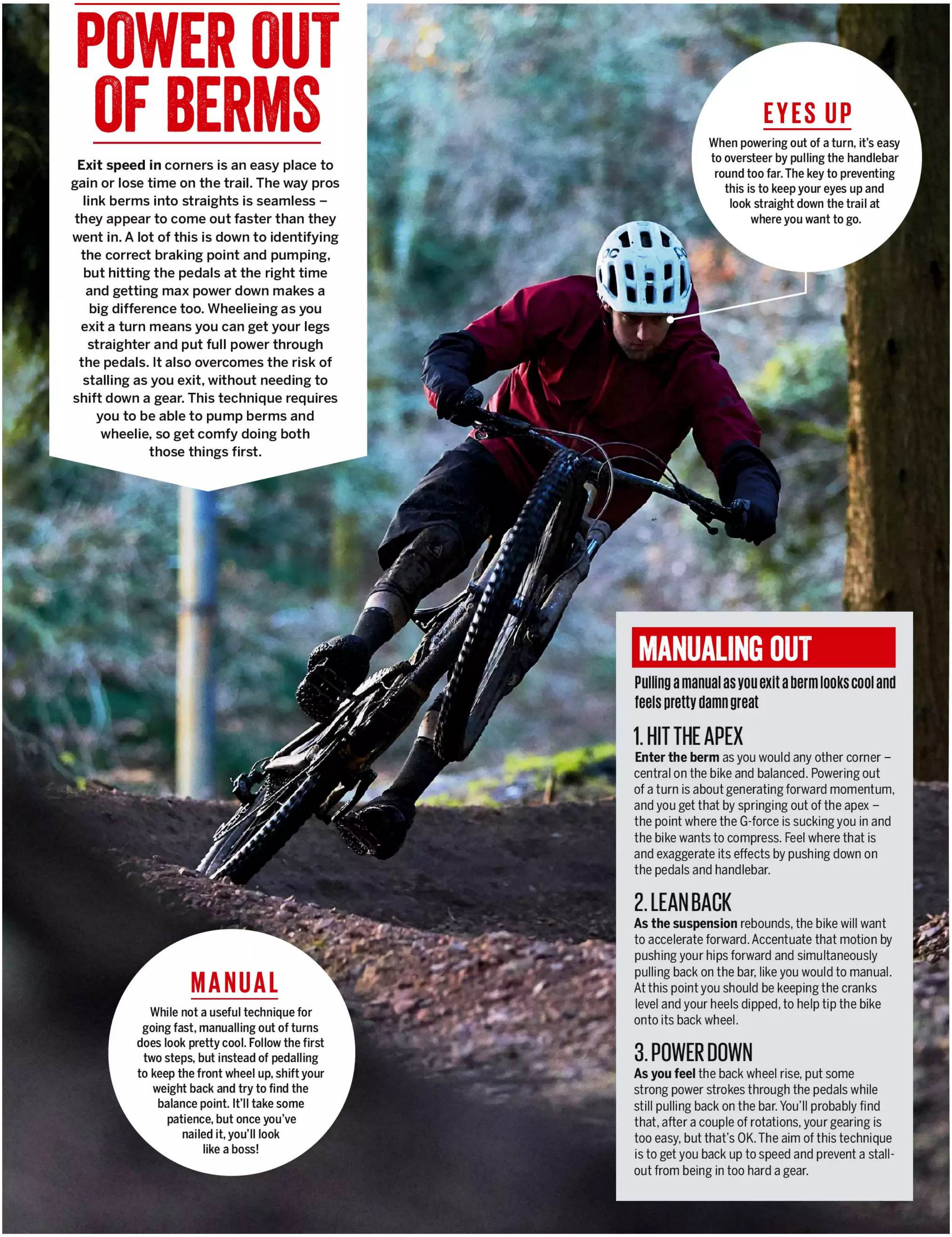
Keep your head up and look where you're going. Although rut riding can be slower than trail centre trails, it's still important to keep your eyes up to help with balance and predicting what's coming ahead.

5 GO FOR GLORY

Finally, when you get yourself set, don't forget to properly lay down some power!

POWER OUT OF BERMS

Exit speed in corners is an easy place to gain or lose time on the trail. The way pros link berms into straights is seamless – they appear to come out faster than they went in. A lot of this is down to identifying the correct braking point and pumping, but hitting the pedals at the right time and getting max power down makes a big difference too. Wheelieing as you exit a turn means you can get your legs straighter and put full power through the pedals. It also overcomes the risk of stalling as you exit, without needing to shift down a gear. This technique requires you to be able to pump berms and wheelie, so get comfy doing both those things first.



EYES UP

When powering out of a turn, it's easy to oversteer by pulling the handlebar round too far. The key to preventing this is to keep your eyes up and look straight down the trail at where you want to go.

MANUAL

While not a useful technique for going fast, manualling out of turns does look pretty cool. Follow the first two steps, but instead of pedalling to keep the front wheel up, shift your weight back and try to find the balance point. It'll take some patience, but once you've nailed it, you'll look like a boss!

MANUALING OUT

Pulling a manual as you exit a berm looks cool and feels pretty damn great

1. HIT THE APEX

Enter the berm as you would any other corner – central on the bike and balanced. Powering out of a turn is about generating forward momentum, and you get that by springing out of the apex – the point where the G-force is sucking you in and the bike wants to compress. Feel where that is and exaggerate its effects by pushing down on the pedals and handlebar.

2. LEAN BACK

As the suspension rebounds, the bike will want to accelerate forward. Accentuate that motion by pushing your hips forward and simultaneously pulling back on the bar, like you would to manual. At this point you should be keeping the cranks level and your heels dipped, to help tip the bike onto its back wheel.

3. POWER DOWN

As you feel the back wheel rise, put some strong power strokes through the pedals while still pulling back on the bar. You'll probably find that, after a couple of rotations, your gearing is too easy, but that's OK. The aim of this technique is to get you back up to speed and prevent a stall-out from being in too hard a gear.

RAIL TURNS

Consistent cornering means faster times for top Scottish racer Greg Williamson, but also more speed, flow and fun for you on the trail. Follow these tips and you'll be flying round the turns in no time!

SET-UP

Cornering is all about VPD – vision, position and direction. Your vision allows you to set your position on the trail, which decides your direction. From entry to exit, rolling into any type of turn at any speed requires you to keep your head up and eyes to the front. This allows you to choose the right cornering technique to apply at the right time.

BRAKING

No matter the type of turn or the entry speed required, getting all of your braking done before you hit the sweet spot, or apex, is a must. This keeps your bike balanced and allows you to get maximum grip from your suspension and tyres.

FOCUS

My number one tip for consistent railing of turns is to not focus on what you're doing with your body. Instead, think about what you're doing to the trail – pushing berms away from you, or drilling your tyres into the floor with hand pressure. External focus equals gains!

APPLYING PRESSURE

Your contact points with the bike – your feet and hands – are the key to railing turns successfully. The sharper the turn (whether bermed or not), the more pressure you need to apply through the bar and pedals. Bermed or banked turns require more pressure from your lower body. Flat or off-camber turns require more even pressure applied through your upper and lower body, with your inside hand being key to front wheel grip.

CORNER TYPES

How Greg Williamson builds on these basics to tackle every turn

BERMS

Greg does all his braking before entering the turn. He spots the sweet spot for applying pressure early and, coming in relaxed and balanced on the bike, "punches" it with the perfect amount of pressure needed, depending on how tight the corner is. He rides with his feet level in most berms, and shifts his vision to the exit of the turn very early.

FLAT TURNS

The trail surface (grip and obstacles) dictates how Greg handles a flat turn. He leans more in tight bends and uses more finesse in open corners. As always, he brakes early and, as soon as he sees the corner, he's looking for the best place to put his tyres, to avoid obstacles that'll affect the bike's lean angle

SWITCHBACKS

Riding linked turns is all about linking up the basic techniques. Greg gives himself room to move by setting up early and entering the first turn as high/wide as possible. This is a bread-and-butter technique, and allows him to shift his eyes to the second turn earlier and, as a result, pick the best set-up and entry point for that corner, too.

SAIL OVER WET ROOTS

Riding wet roots can sometimes seem like a mountain bike equivalent of Russian roulette – you feel like it's not a matter of if, but when, you're going to hit the deck. Fortunately, good line choice, commitment and proper technique will help you clean them rubber side down.

1 VISION

Choose a straight line and aim your front wheel so it's perpendicular to the biggest roots and hits them head on. Try to avoid large diagonal roots, which will direct your tyres off the trail.

2 MOMENTUM

Once you're happy with your basic technique, try hitting root sections a touch faster. Slowing down may help your confidence but it's a bad idea because it means your tyres will be in contact with the slippery roots for longer.

3 HEAD UP

Have confidence in your line choice and speed, then get your chin up and look over the roots at the trail ahead to help your balance.

4 PRESSURE CONTROL

Ride root sections more smoothly by unweighting your wheels individually as they hit large roots. Do this by popping very small manuals and rear wheel lifts.

5 BALANCE

From a perfectly balanced body position it's easier to recover a slip and your suspension will work better. Support your weight with your legs, get your heels down and don't hang back off your handlebar or lean back. Stay loose and relaxed, otherwise you'll ping off the roots rather than absorb them.

DESCEND AT SPEED

When you want to get to the bottom of the hill as fast as possible – whether you're racing the 'Ard Rock or trying to beat your mates – just riding as hard as you can won't cut it. To consistently post good times, you need to ride safe (to avoid crashes) and maintain your flow. Here's how to go super-fast, safely.

GIRO
MAXXIS

LOOK UP

This seems like an obvious tip, but it's often the hardest skill to conquer when the trail gets rough. Looking up helps your balance, allows you to spot lines and tricky sections, and gives you more time to react.

PROTECT YOUR EYES

At high speeds, the air flowing past your face can cause you to squint, making it harder to see upcoming obstacles. Glasses or goggles will prevent this, as well as protecting your eyes from bugs, dust and trail debris.

PUMP AND PEDAL

To gain and maintain speed on rough or fast sections of trail, it's safer to pump than try to pedal. Make yourself heavy on downslopes, by pushing your body weight through the bike and into the ground, to gain extra speed. When the trail levels out or becomes smooth, get in a good gear and crank hard if you want to post a good time.

KEEP HEELS LOW

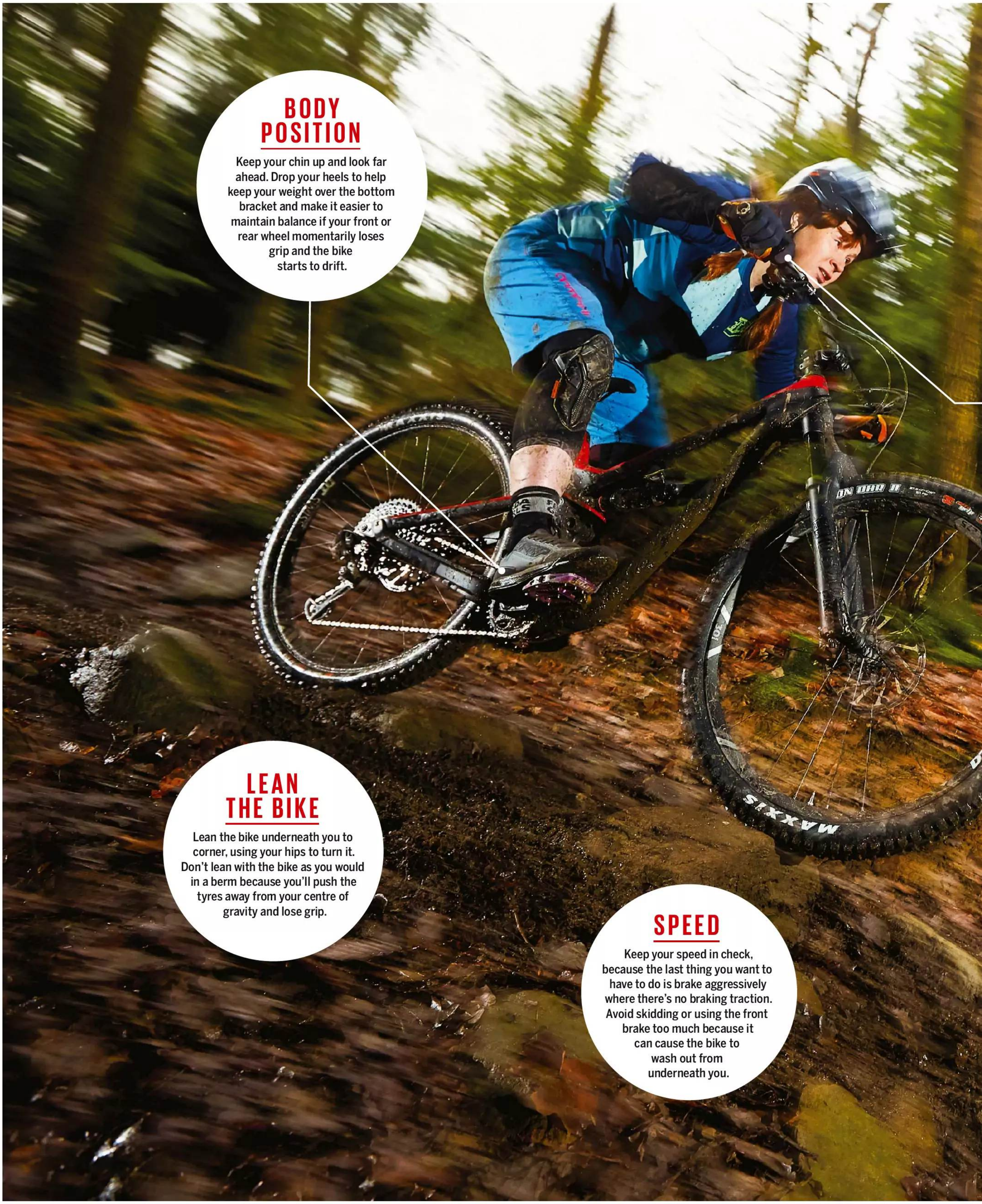
Drop your heels and focus on carrying your body weight with your legs. This puts your centre of mass around the bottom bracket, where it's low, safe and stable. When you brake, your weight will shift forward, so drop your heels even more so you don't end up leaning on the bar.

STAY SMOOTH

Don't pinball from rock to rock or corner to corner – you'll end up breaking yourself or your bike. Enter tight corners or tricky sections at a manageable pace, then let off the brakes and exit fast. Look for smooth and straight lines that you know you can ride safely.

HAVE FUN

Be confident and enjoy yourself. Letting your nerves get the better of you is almost guaranteed to make your ride worse, as will overthinking. Relax your grip on the bar and focus on having fun.



BODY POSITION

Keep your chin up and look far ahead. Drop your heels to help keep your weight over the bottom bracket and make it easier to maintain balance if your front or rear wheel momentarily loses grip and the bike starts to drift.

LEAN THE BIKE

Lean the bike underneath you to corner, using your hips to turn it. Don't lean with the bike as you would in a berm because you'll push the tyres away from your centre of gravity and lose grip.

SPEED

Keep your speed in check, because the last thing you want to have to do is brake aggressively where there's no braking traction. Avoid skidding or using the front brake too much because it can cause the bike to wash out from underneath you.

LOOSE DESCENTS

Get your position, speed and line sorted to stay in control

BRAKING

Never use the front or the rear brake on its own. Apply both brakes gradually together, then use slightly more rear brake to avoid your front tyre drifting if it's really loose.

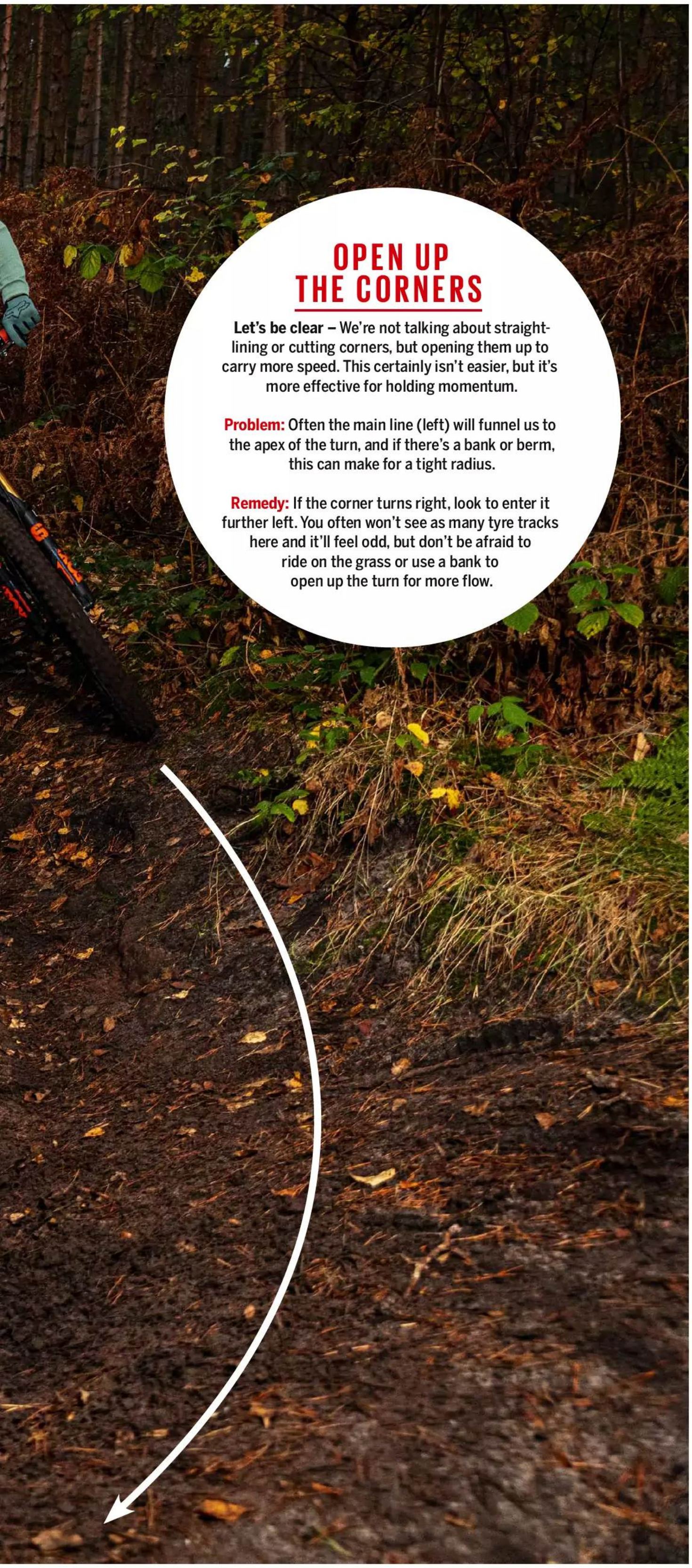
TRACTION

If the descent is wide, look for the best traction to brake and turn. This is usually on the worn line which has been cleared of gravel by other riders. Drifting too far out on a loose turn will change your level of grip and cause you to lose balance.

READ THE TRAIL

Picture the scene. You're riding a favourite trail and find yourself at the top with a rider you don't know. You're confident you'll keep on their wheel as you drop in behind them. As you approach the first tight right-hander, all of a sudden they move left, off the main line, and shoot across the trail with more exit speed than you thought possible. The gap lengthens. You speed into a rooty off-camber section and, as you bump through, the rider ahead is half a metre higher up the slope, skimming the smoother line, before finally dropping you on the next corner.

This happens to everyone – sometimes you can't see the wood for the trees and you get stuck riding the main line. The main line is generally the route of least resistance – the line taken by the majority, and often by those who don't know where they're going. But as you continue to learn, this is far from the best way down most trails, and if you want to improve, you often need to improve your line choice as much as your technique.

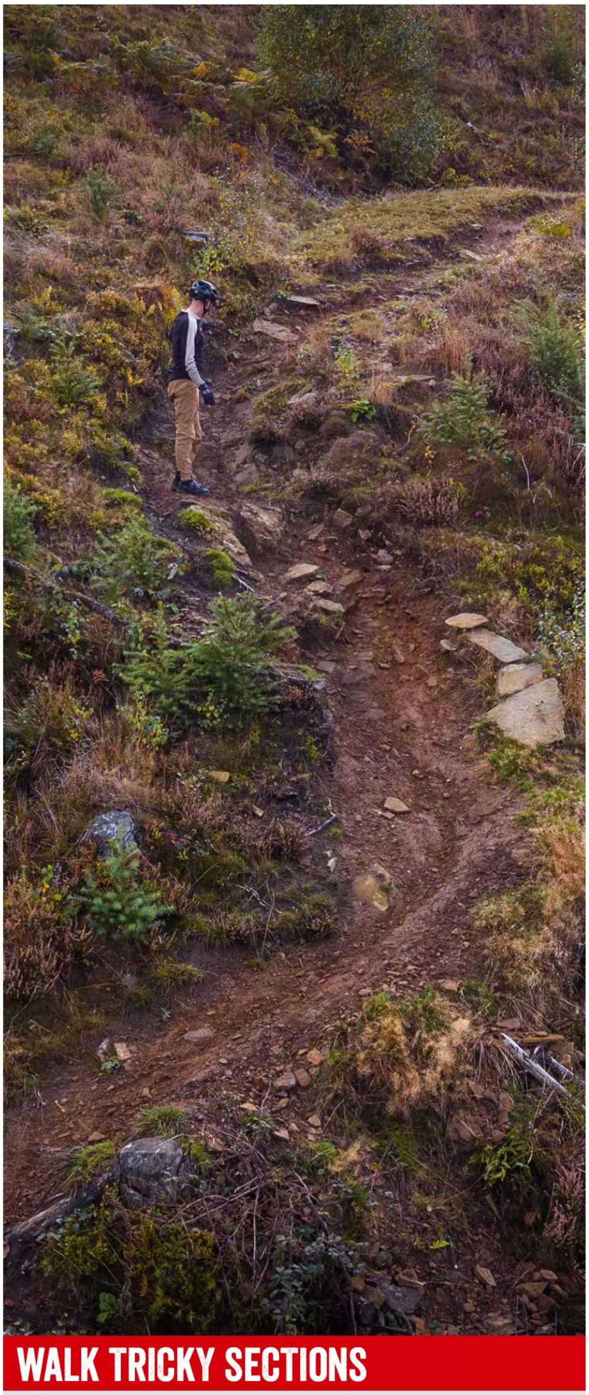


OPEN UP THE CORNERS

Let's be clear – We're not talking about straight-lining or cutting corners, but opening them up to carry more speed. This certainly isn't easier, but it's more effective for holding momentum.

Problem: Often the main line (left) will funnel us to the apex of the turn, and if there's a bank or berm, this can make for a tight radius.

Remedy: If the corner turns right, look to enter it further left. You often won't see as many tyre tracks here and it'll feel odd, but don't be afraid to ride on the grass or use a bank to open up the turn for more flow.



WALK TRICKY SECTIONS

Many riders overlook this, in which case a slow or problem section of trail is never properly examined to break it down and understand why it's hard.

Problem: A section or corner consistently gives you problems, or you ride it badly because the line doesn't make sense or leads you into a momentum cul-de-sac.

Remedy: Stop! Tell the crew you need to understand the issue (you won't be the only one) and push back up to walk the section. Figure out a better line – there will be options – and then re-ride it. You'll probably find the new line is more interesting to ride, too.

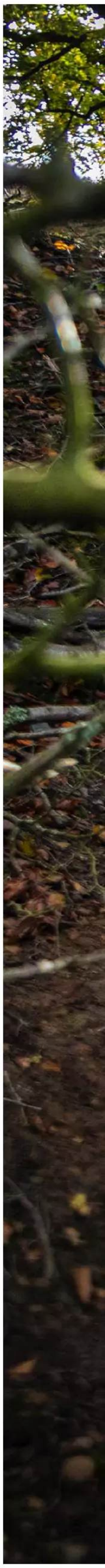
BRAKE EARLY

Braking bumps ravage trails, and when you assess where they are, it shows that the majority of riders are braking far too late before a corner.

Problem: Applying the brakes in berms and corners unsettles the bike and causes you to lose grip and momentum.

Remedy: Aim to brake earlier and set your speed, so that you come off the brakes before you lean into the turn. The bike will grip and corner nicely, and the suspension will also be much improved at handling the braking bumps left by other riders.

AIM TO BRAKE EARLIER AND SET YOUR SPEED SO THAT YOU COME OFF THE BRAKES BEFORE YOU LEAN IN



LOOK BEYOND THE PROBLEMS

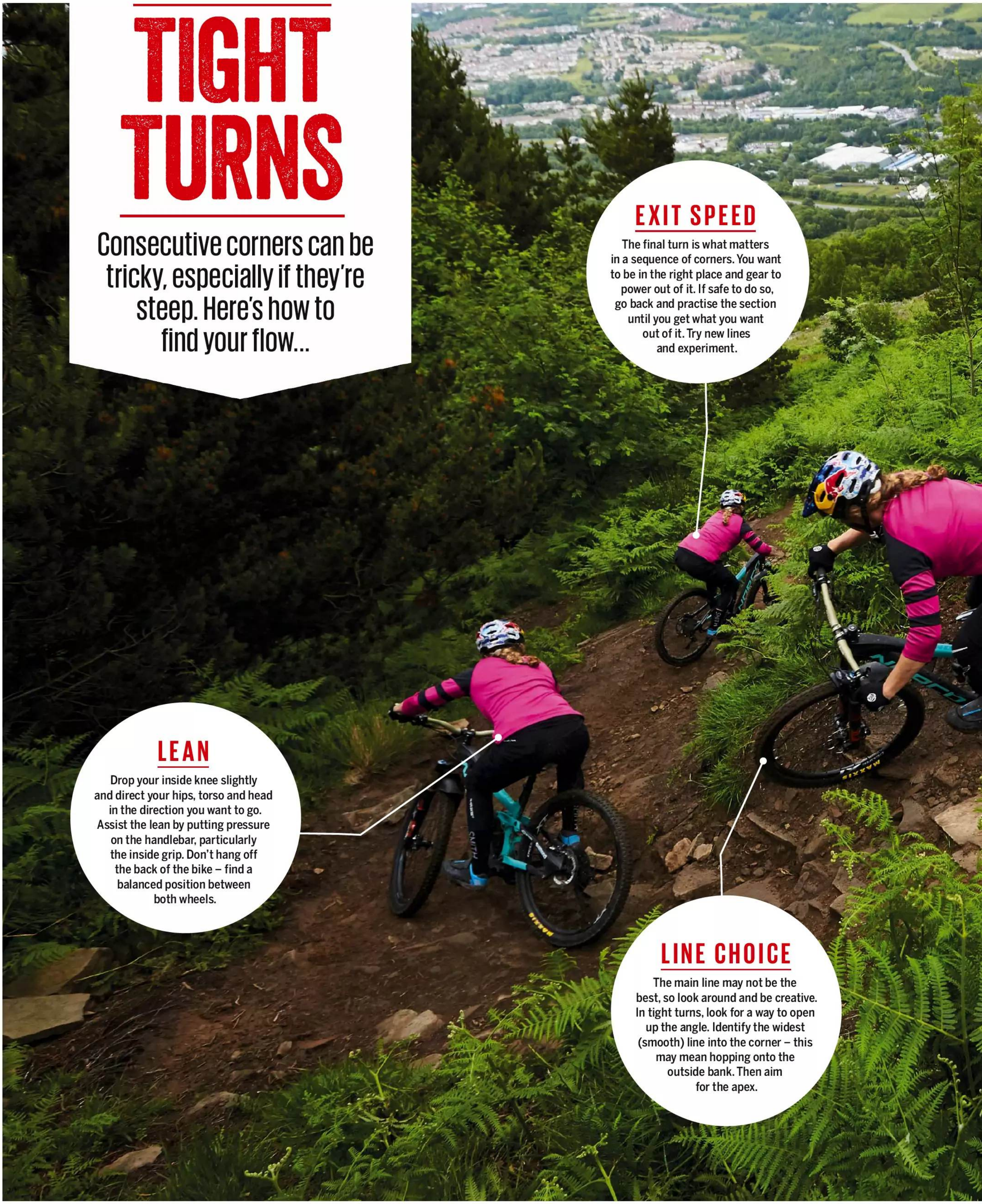
Trails meander down the hillside, around trees, rocks, banks and the like. Often these will form visual barriers to where you're going and funnel your vision. There are many sections on World Cup courses where these cause issues!

Problem: Trail features block the line of sight through a corner. You'll often fixate on the tree in the track, or your eyes will be drawn to a point in the corner you can see.

Remedy: Imagine the tree or obstacle wasn't there – where would you be looking? It'll often be much further ahead, which will mean you can be more patient as to where you turn into the corner or line up for a gap or jump.

TIGHT TURNS

Consecutive corners can be tricky, especially if they're steep. Here's how to find your flow…



EXIT SPEED

The final turn is what matters in a sequence of corners. You want to be in the right place and gear to power out of it. If safe to do so, go back and practise the section until you get what you want out of it. Try new lines and experiment.

LEAN

Drop your inside knee slightly and direct your hips, torso and head in the direction you want to go. Assist the lean by putting pressure on the handlebar, particularly the inside grip. Don't hang off the back of the bike – find a balanced position between both wheels.

LINE CHOICE

The main line may not be the best, so look around and be creative. In tight turns, look for a way to open up the angle. Identify the widest (smooth) line into the corner – this may mean hopping onto the outside bank. Then aim for the apex.

RECCE

Check out tricky sections on foot first. This will help you identify lines and hazards, and let you see what comes after the turns, which will help with gear choice and exit lines. Working your way up from the bottom can teach you a lot about where you want to end up.

ENTRY SPEED

Good control in the first turn will set you up for the next one. Get your braking done in the straight line before the turn and try to be off the brakes when you hit the apex or change direction. Dragging your brakes hinders traction and makes it hard to lean the bike.

PICK LINES IN ROCK GARDENS

Rock gardens add both fun and fear to the trail. If you get them wrong, you're in for a wild ride, but when you get them right, you can carry your flow and keep on smiling as you go. Here are our top tips for choosing the best way to negotiate them in safety and style.

THE SMOOTH LINE

This is the path of least resistance, which avoids the biggest holes and rocks. Body position is key here so that you can adjust your direction as you go. Lean too far back and you won't be able to steer accurately. Balance too far forward and you'll get caught by a bump. So find a centred position and use your eyes to guide you through, always looking ahead. Stay relaxed and keep your feet level.

THE DIRECT LINE

This is as straight as possible, regardless of the obstacles. Momentum is your friend, to help carry you over holes and rocks. Adopt a centred position on the bike, with your heels down and elbows up – you're going to need your arms and legs to act as extra suspension to smooth out the trail. Spot your exit and aim for it. Keep relaxed so you can maintain balance.

GET AIRBORNE

For experts, the smoothest way over a rock garden is often to jump the whole thing – providing it's not too long, or at least the gnarliest section isn't. You'll need to have picked out a precise line and exit before attempting this. Body position is crucial - if you land into more rocks and are too far forward, you may get slammed into the handlebar.

1 LOOK BEFORE YOU LEAP

It's always best to inspect a rock garden before you attempt to ride it. Choose a line that suits your ability and build up to hitting it faster and faster.

2 VISION

Potentially the most important tip for all mountain biking, and a necessity here. Keep your eyes looking where you want to go, not at the obstacles you're riding over. This will help keep you balanced and on-line.

3 BODY POSITION

It's important to find a central position on the bike and use the flex in your arms and legs to smooth out the rocks and holes as best you can.

4 FEET LEVEL

Striking your pedals on rocks is asking for trouble. Keeping your feet level helps avoid the rocks and will also keep you in balance and let you move around on the bike as needed.

5 SPEED IS YOUR FRIEND

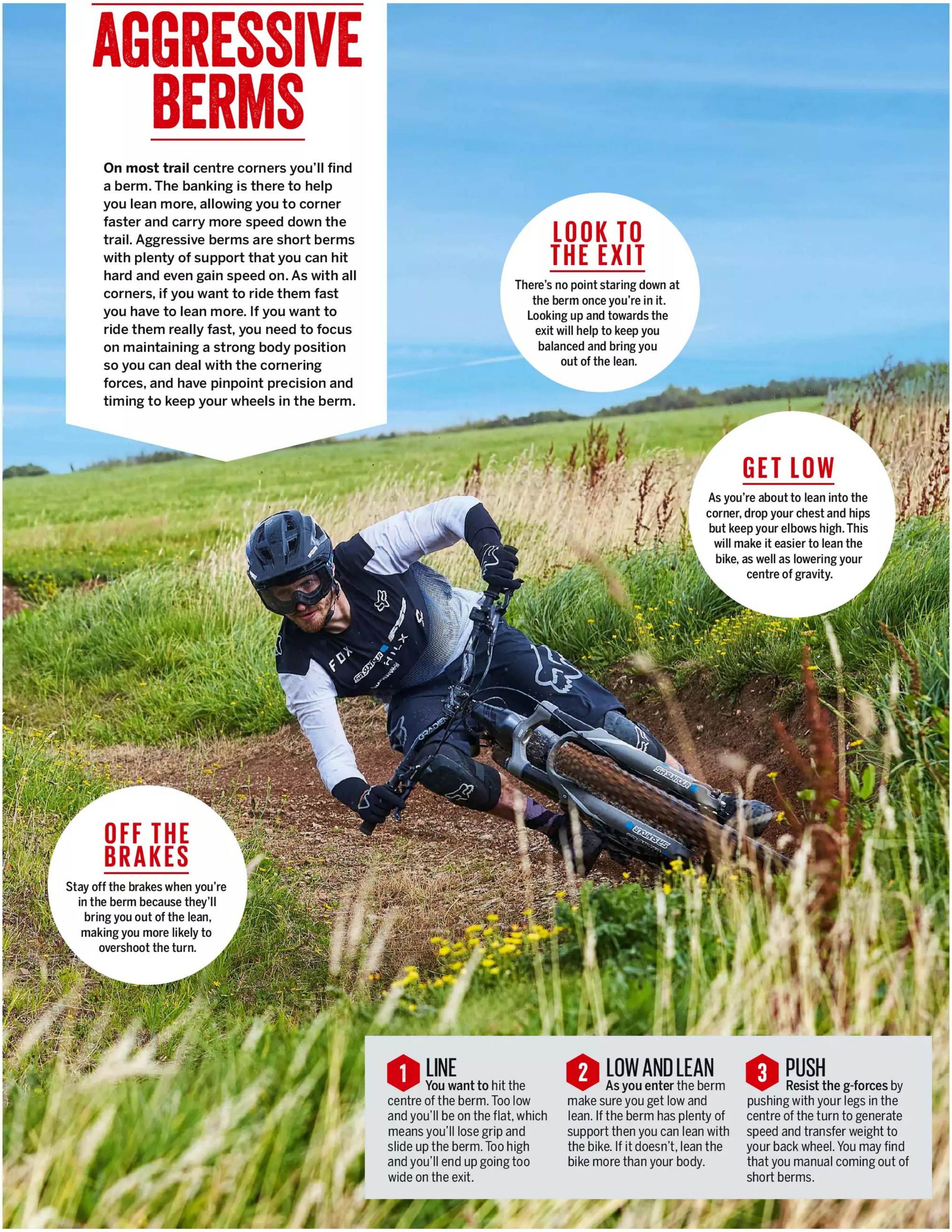
Carrying speed can help smooth a rock garden out, because your wheels won't fall into every hole. But only go as fast as your skill level allows. Gradually build up to pushing yourself faster.

6 STAY LIGHT ON THE BIKE

In small rock gardens, you can preload your suspension just before you enter and use the rebound to help unweight the bike as you hit the rocks. Get this right and you'll glide over the top.

AGGRESSIVE BERMS

On most trail centre corners you'll find a berm. The banking is there to help you lean more, allowing you to corner faster and carry more speed down the trail. Aggressive berms are short berms with plenty of support that you can hit hard and even gain speed on. As with all corners, if you want to ride them fast you have to lean more. If you want to ride them really fast, you need to focus on maintaining a strong body position so you can deal with the cornering forces, and have pinpoint precision and timing to keep your wheels in the berm.



LOOK TO THE EXIT

There's no point staring down at the berm once you're in it. Looking up and towards the exit will help to keep you balanced and bring you out of the lean.

GET LOW

As you're about to lean into the corner, drop your chest and hips but keep your elbows high. This will make it easier to lean the bike, as well as lowering your centre of gravity.

OFF THE BRAKES

Stay off the brakes when you're in the berm because they'll bring you out of the lean, making you more likely to overshoot the turn.

1 LINE

You want to hit the centre of the berm. Too low and you'll be on the flat, which means you'll lose grip and slide up the berm. Too high and you'll end up going too wide on the exit.

2 LOW AND LEAN

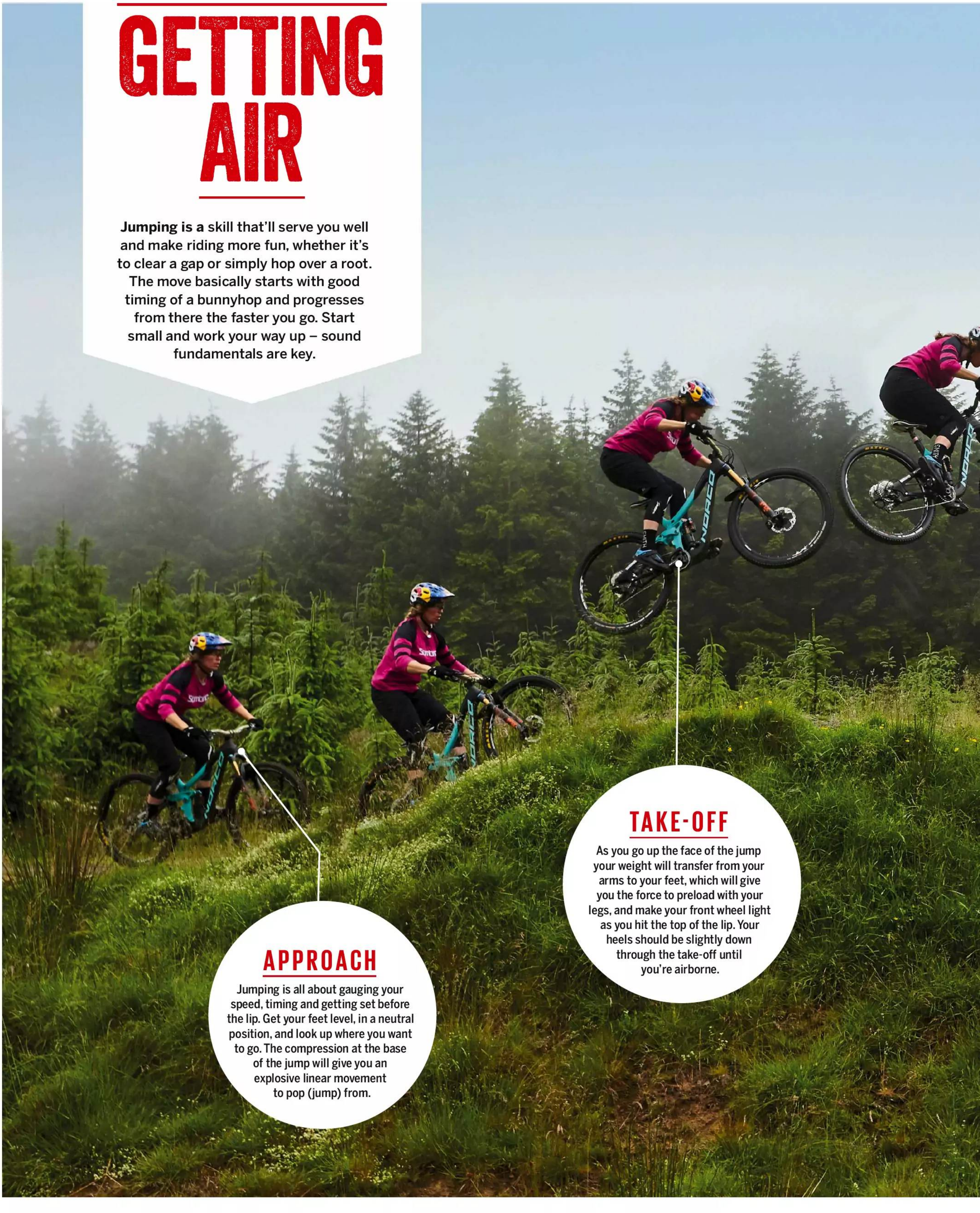
As you enter the berm make sure you get low and lean. If the berm has plenty of support then you can lean with the bike. If it doesn't, lean the bike more than your body.

3 PUSH

Resist the g-forces by pushing with your legs in the centre of the turn to generate speed and transfer weight to your back wheel. You may find that you manual coming out of short berms.

GETTING AIR

Jumping is a skill that'll serve you well and make riding more fun, whether it's to clear a gap or simply hop over a root. The move basically starts with good timing of a bunnyhop and progresses from there the faster you go. Start small and work your way up – sound fundamentals are key.

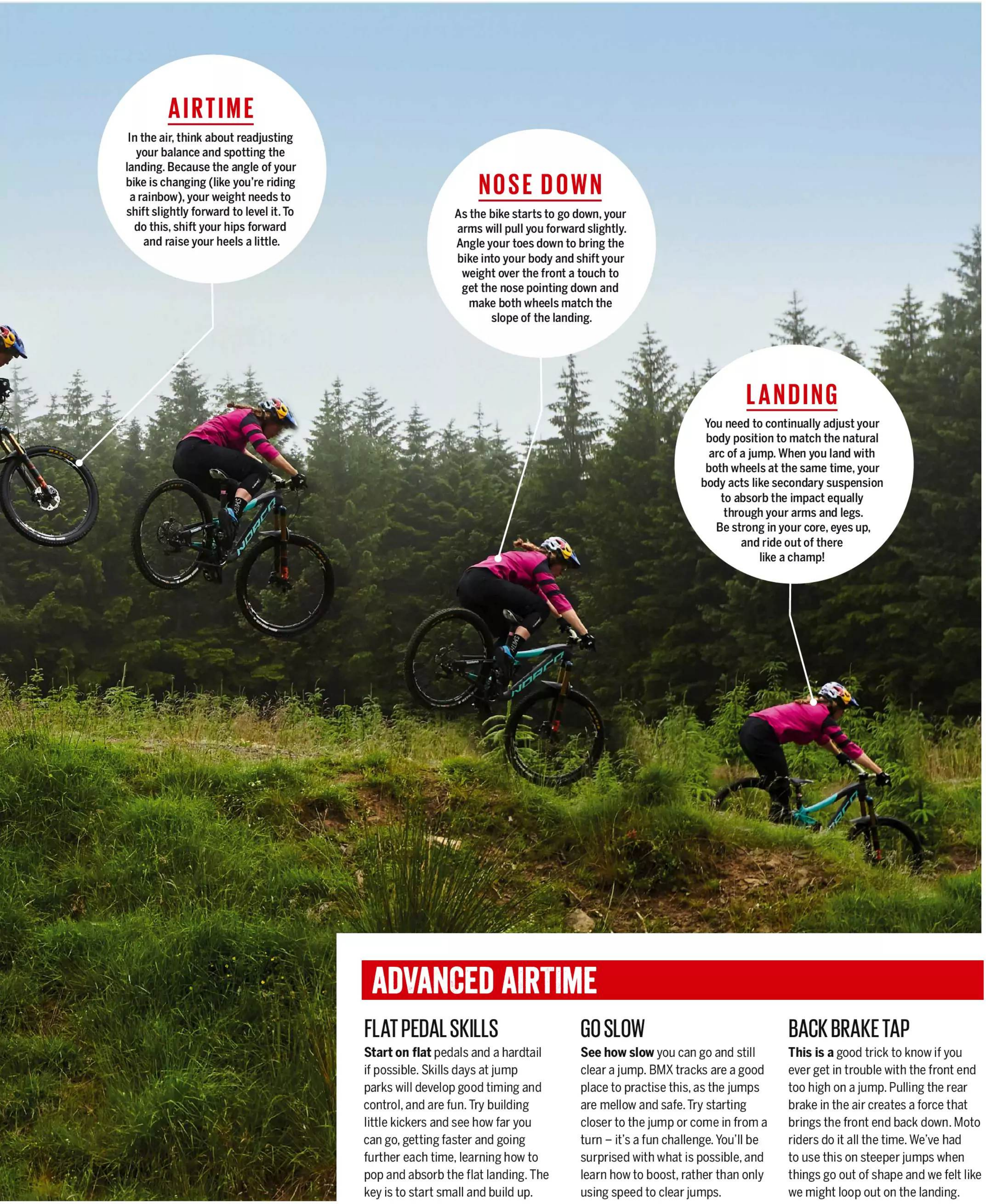


APPROACH

Jumping is all about gauging your speed, timing and getting set before the lip. Get your feet level, in a neutral position, and look up where you want to go. The compression at the base of the jump will give you an explosive linear movement to pop (jump) from.

TAKE-OFF

As you go up the face of the jump your weight will transfer from your arms to your feet, which will give you the force to preload with your legs, and make your front wheel light as you hit the top of the lip. Your heels should be slightly down through the take-off until you're airborne.



AIRTIME

In the air, think about readjusting your balance and spotting the landing. Because the angle of your bike is changing (like you're riding a rainbow), your weight needs to shift slightly forward to level it. To do this, shift your hips forward and raise your heels a little.

NOSE DOWN

As the bike starts to go down, your arms will pull you forward slightly. Angle your toes down to bring the bike into your body and shift your weight over the front a touch to get the nose pointing down and make both wheels match the slope of the landing.

LANDING

You need to continually adjust your body position to match the natural arc of a jump. When you land with both wheels at the same time, your body acts like secondary suspension to absorb the impact equally through your arms and legs. Be strong in your core, eyes up, and ride out of there like a champ!

ADVANCED AIRTIME

FLAT PEDAL SKILLS

Start on flat pedals and a hardtail if possible. Skills days at jump parks will develop good timing and control, and are fun. Try building little kickers and see how far you can go, getting faster and going further each time, learning how to pop and absorb the flat landing. The key is to start small and build up.

GO SLOW

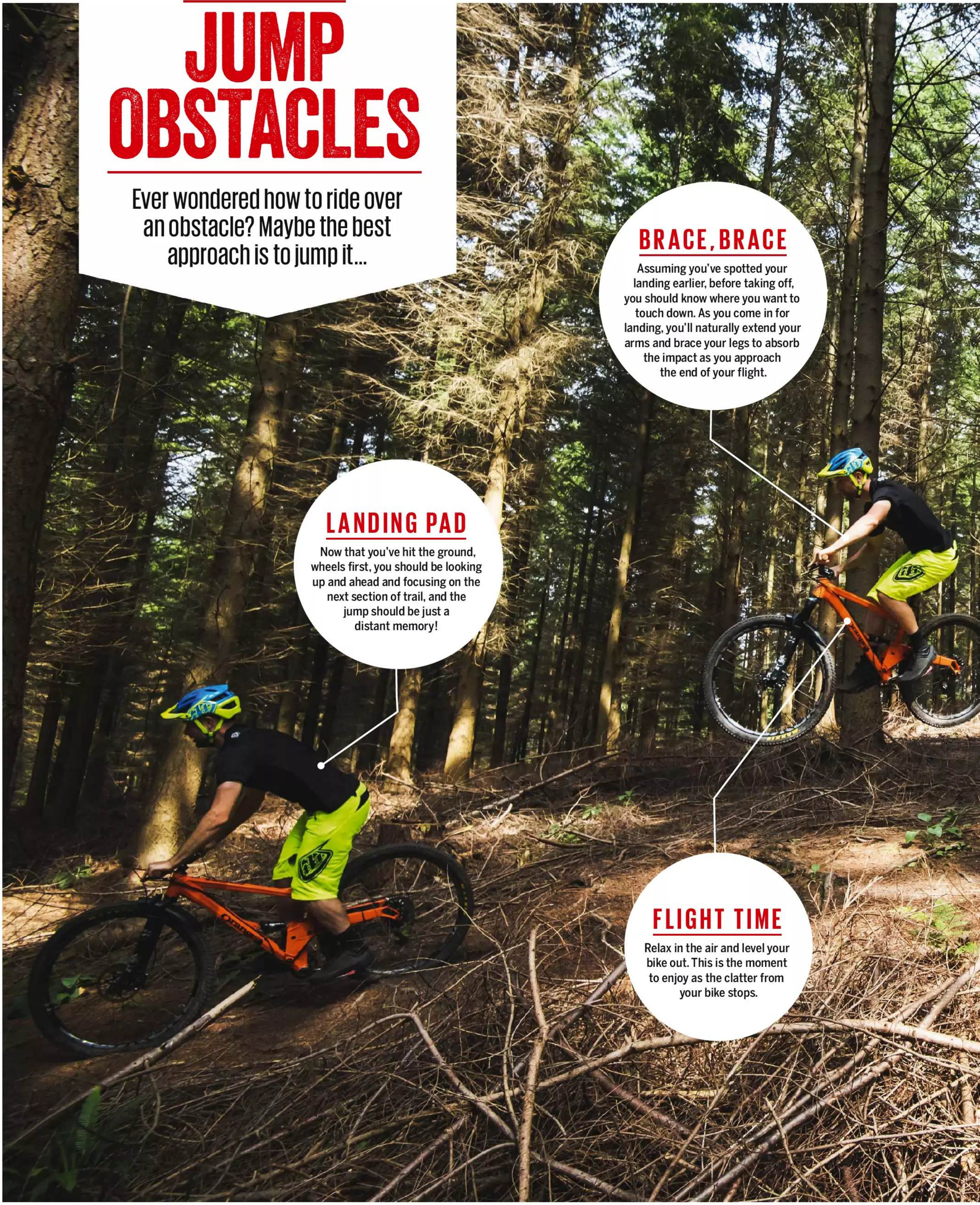
See how slow you can go and still clear a jump. BMX tracks are a good place to practise this, as the jumps are mellow and safe. Try starting closer to the jump or come in from a turn – it's a fun challenge. You'll be surprised with what is possible, and learn how to boost, rather than only using speed to clear jumps.

BACK BRAKE TAP

This is a good trick to know if you ever get in trouble with the front end too high on a jump. Pulling the rear brake in the air creates a force that brings the front end back down. Moto riders do it all the time. We've had to use this on steeper jumps when things go out of shape and we felt like we might loop out on the landing.

JUMP OBSTACLES

Ever wondered how to ride over an obstacle? Maybe the best approach is to jump it...



BRACE, BRACE

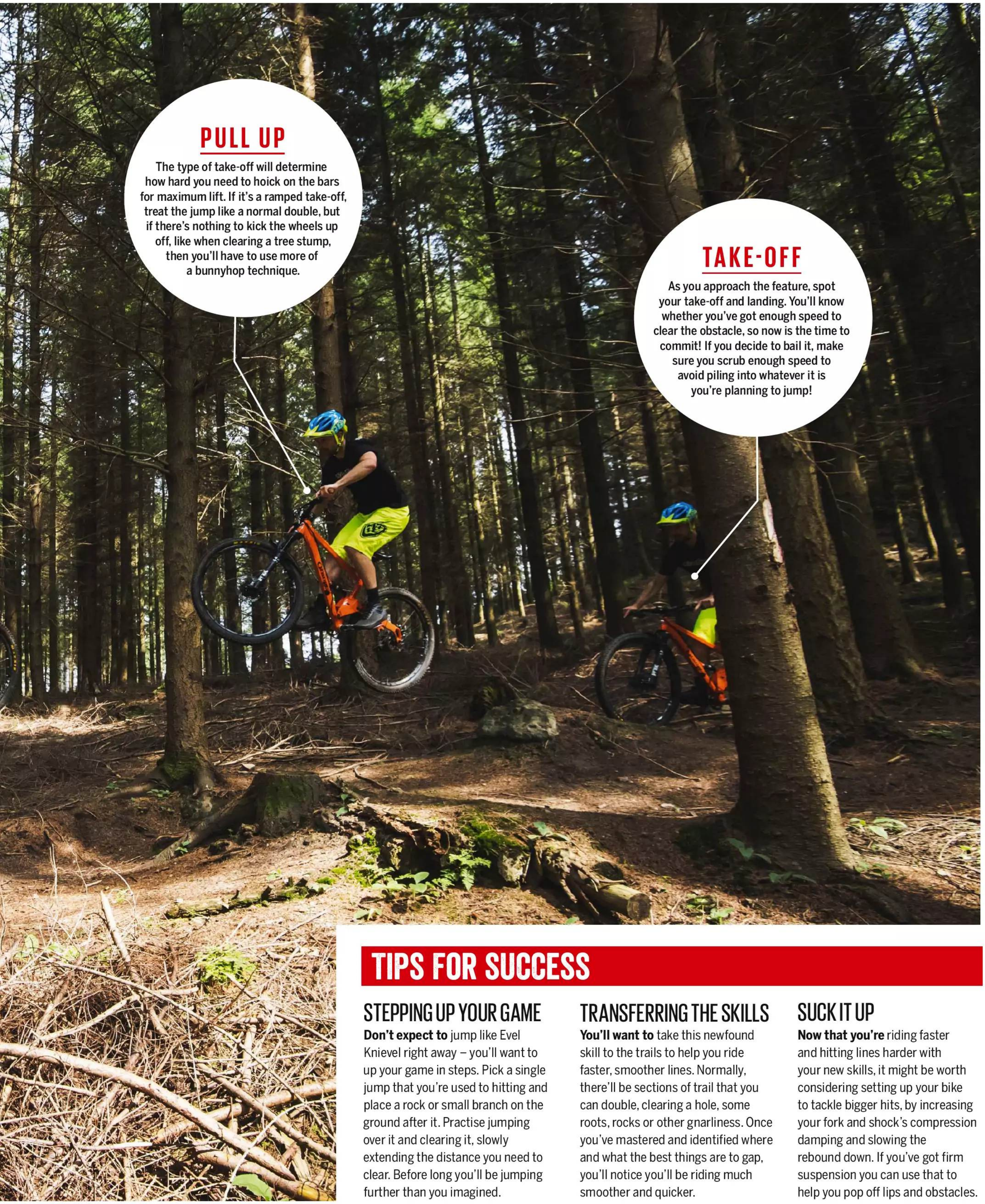
Assuming you've spotted your landing earlier, before taking off, you should know where you want to touch down. As you come in for landing, you'll naturally extend your arms and brace your legs to absorb the impact as you approach the end of your flight.

LANDING PAD

Now that you've hit the ground, wheels first, you should be looking up and ahead and focusing on the next section of trail, and the jump should be just a distant memory!

FLIGHT TIME

Relax in the air and level your bike out. This is the moment to enjoy as the clatter from your bike stops.



PULL UP

The type of take-off will determine how hard you need to hoick on the bars for maximum lift. If it's a ramped take-off, treat the jump like a normal double, but if there's nothing to kick the wheels up off, like when clearing a tree stump, then you'll have to use more of a bunnyhop technique.

TAKE-OFF

As you approach the feature, spot your take-off and landing. You'll know whether you've got enough speed to clear the obstacle, so now is the time to commit! If you decide to bail it, make sure you scrub enough speed to avoid piling into whatever it is you're planning to jump!

TIPS FOR SUCCESS

STEPPING UP YOUR GAME

Don't expect to jump like Evel Knievel right away – you'll want to up your game in steps. Pick a single jump that you're used to hitting and place a rock or small branch on the ground after it. Practise jumping over it and clearing it, slowly extending the distance you need to clear. Before long you'll be jumping further than you imagined.

TRANSFERRING THE SKILLS

You'll want to take this newfound skill to the trails to help you ride faster, smoother lines. Normally, there'll be sections of trail that you can double, clearing a hole, some roots, rocks or other gnarliness. Once you've mastered and identified where and what the best things are to gap, you'll notice you'll be riding much smoother and quicker.

SUCK IT UP

Now that you're riding faster and hitting lines harder with your new skills, it might be worth considering setting up your bike to tackle bigger hits, by increasing your fork and shock's compression damping and slowing the rebound down. If you've got firm suspension you can use that to help you pop off lips and obstacles.

BOOST JUMPS

He may be Tahnée Seagrave's little brother, but there's nothing small about the way Kaos rides his bike. "Skywards and sideways" is the only way for him, and this is the secret to how he does it.

1. APPROACH

Chilled, relaxed, calm or cool – use the adjective of your choice to help you roll into the take-off with all you need for a successful flight. Just like baking a cake, having all the ingredients weighed out before you start makes success much more likely. Approach with enough speed to clear the jump, but not so much that the time needed to press into the lip is too short. As with all MTB skills, keep your vision forward, fingers over the brakes, and aim to choose the smoothest, straightest line to your take-off point.

2. POSTURE

Stand relaxed and supple on your bike. Successful jumping is all about using your limbs as natural springs, allowing them to store and release energy, and doing so across multiple joints is much more effective. To make this happen, staying tall and chilled in the last few metres before the jump's transition is essential.

4.PROGRESSION

Start with bunnyhopping – this dynamic weight shift is the core of jump timing. From there, find progressively different take-offs to practise on, from long and flat to short and steep. The more vertical distance you have, the better. Starting with small lips to natural long-landing hills and then progressing to table-tops, step-downs and doubles is best for your confidence and learning. Variety is king!

3. TIMING

Pause, push then pop! Wait until you feel the transition between flat ground and the start of the lip, then push into the upslope – to store up that valuable energy in your bike and body – and finally, pop for take-off. The timing of this process is the difference between smooth jumping with good height and the dreaded 'dead sailor'. The only way to solidify it is practice. The number one tip? Both wheels should use the take-off for lift. Imagine your front wheel knocking a can over as you pop, then your back wheel finishing the job and crushing it.

TOP TIPS FROM KAOS

RELAX

As you approach the jump, you want to be confident and comfortable on your bike. Stand in a natural position – centred on your bike, with weight distributed evenly between hands and legs. This is the first step to a confident take-off, so you don't loop out or go over the bars.

SPEED

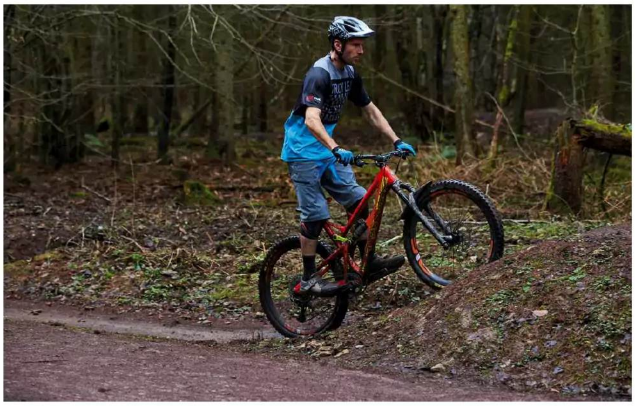
You always need the right speed for the jump, so if you're taking it on for the first time, a couple of test runs are a good idea. When you're finally confident enough with your speed, you can go for it.

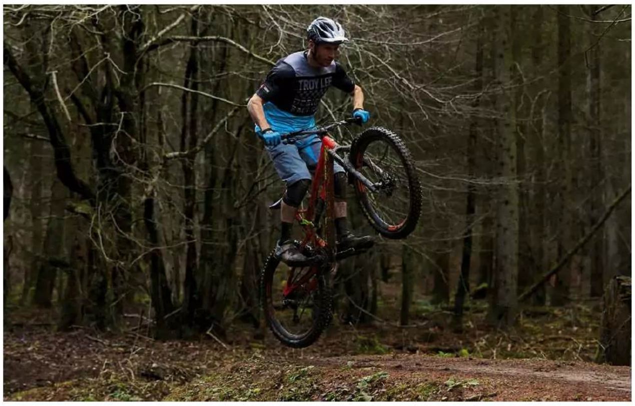
WHIP IT!

It's the best feeling in the world! Practising and learning to whip takes time – a lot of time. But even a little bit of shape in the air makes it a lot more fun, and in certain situations it's a lot safer than going stiff and dead mid-flight. Always start by coming into the take-off at a slight angle, using that space to push off the lip to start moving the rear of the bike to that side as you pop!

FIX COMMON JUMPING FAULTS

Jumping is, without a doubt, the most popular course any MTB coaching company can deliver. This may be because ever-increasing numbers of jump lines are cropping up at trail centres and it's super-fun – although it really hurts when it goes wrong! Speed and the jump's trajectory will get you airborne, but not necessarily in a safe or efficient manner. Here are four common mistakes people make and how to overcome them.



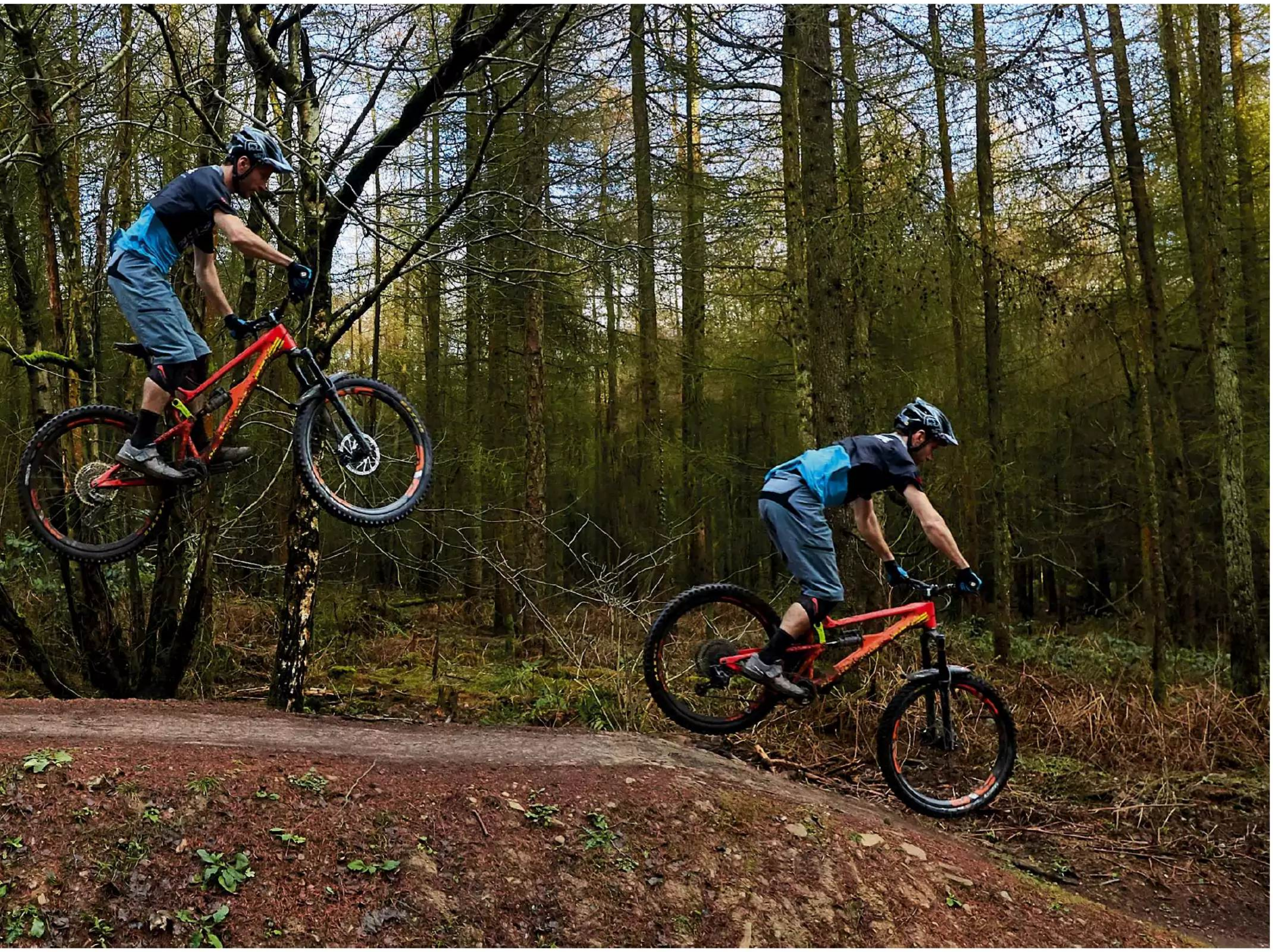


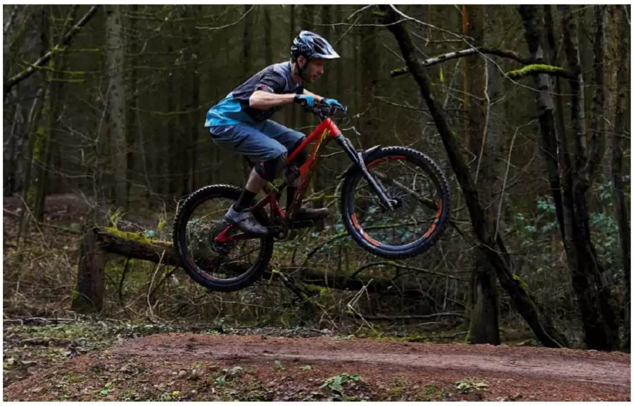
1 JUMPING TOO EARLY

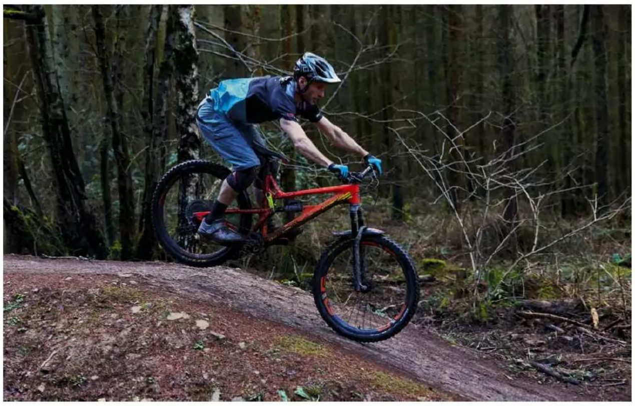
As with anything in life, timing is everything! Many riders try to take off too early, and this can cause issues, especially if you're new to jumping. Firstly, you won't actually jump that far, but it can also be unsafe and may even throw you over the bars if the back wheel gets bucked. You should be aiming to jump when you get close to the top of the lip, not when you think your front wheel is there.

2 PULLING UP

'Pulling up' is a term often used in relation to jumping, but you shouldn't rely on tugging on the handlebar to get airborne. This requires you to have equal strength through both arms, and if one is stronger than the other, you can end up pulling up more on that side of the bike, which can lead to a "dead sailor" – that moment we've all had when you're flying slightly sideways and can't do anything to fix it. Instead, always jump through your legs. As you're moving upwards, allow your arms to straighten and pretty much lock out. This will help the bike move into the air in a straight line.







3 BENDING YOUR LEGS

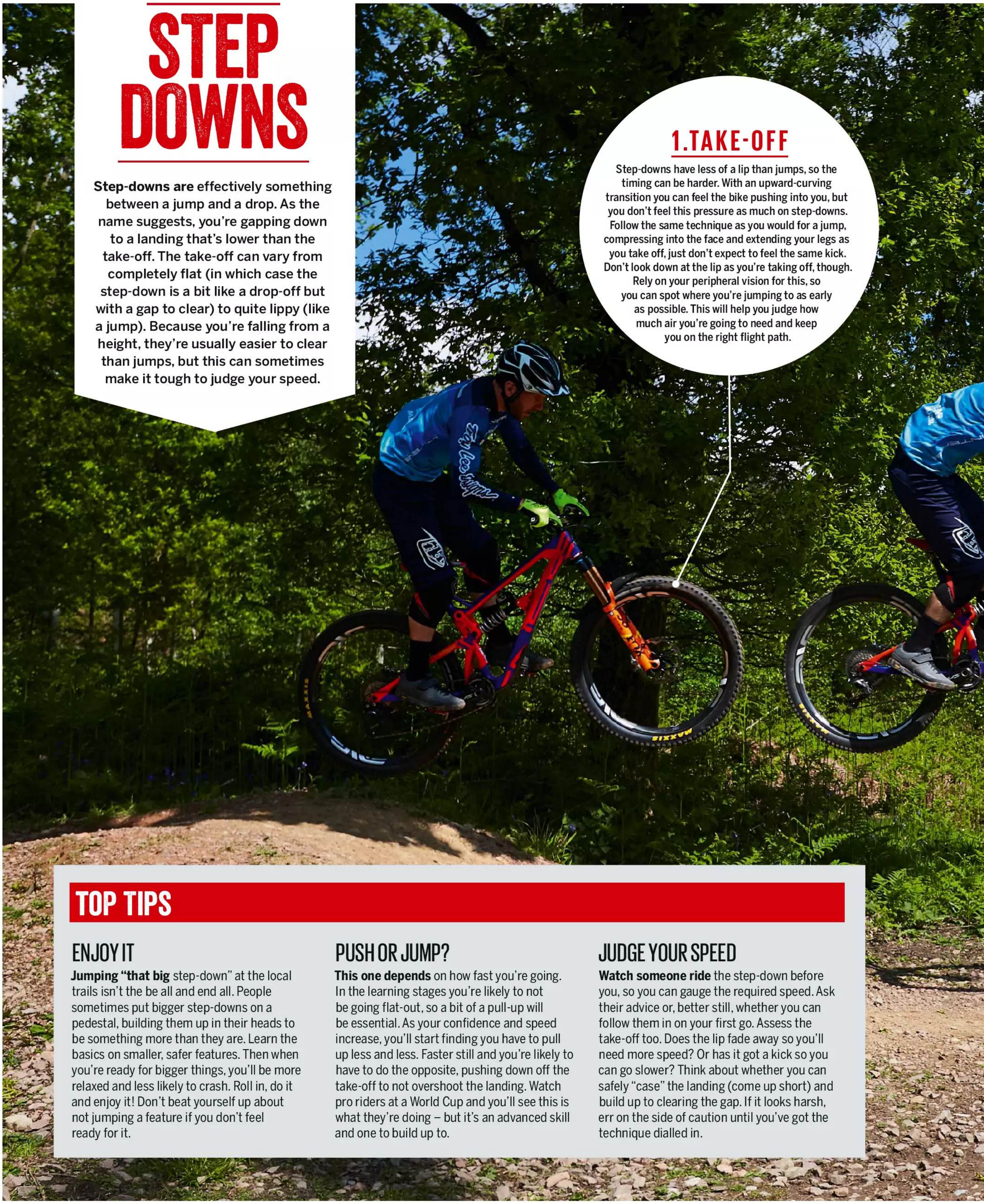
Ever wondered why your mate always goes higher than you on jumps? It could be because you're not actually jumping! If you take off and bend your legs, allowing the bike to come to you, you're squashing the jump rather than sending it. Instead, aim to get your hips high and extend your legs so that they're straight. Higher hips will mean your torso will be higher, so the bike can fly higher. To jump a bike you must actually jump. Bent legs can also cause problems when you land, so be quite positive with them and don't fold down too low.

4 UNEVEN WEIGHT DISTRIBUTION

This is a common mistake many riders make during general riding, but particularly rears its head on jumps. Not jumping with even weight going through both legs/feet can cause you to dead sailor. To stop this happening, try to imagine that both pedals come straight out of the bike's bottom bracket. This can encourage you to push through both feet when taking off. Stay balanced over the centre of the bike in midair and don't move your weight too far back on landing or you'll lose front wheel grip.

STEP DOWNS

Step-downs are effectively something between a jump and a drop. As the name suggests, you're gapping down to a landing that's lower than the take-off. The take-off can vary from completely flat (in which case the step-down is a bit like a drop-off but with a gap to clear) to quite lippy (like a jump). Because you're falling from a height, they're usually easier to clear than jumps, but this can sometimes make it tough to judge your speed.



1.TAKE-OFF

Step-downs have less of a lip than jumps, so the timing can be harder. With an upward-curving transition you can feel the bike pushing into you, but you don't feel this pressure as much on step-downs. Follow the same technique as you would for a jump, compressing into the face and extending your legs as you take off, just don't expect to feel the same kick. Don't look down at the lip as you're taking off, though. Rely on your peripheral vision for this, so you can spot where you're jumping to as early as possible. This will help you judge how much air you're going to need and keep you on the right flight path.

TOP TIPS

ENJOY IT

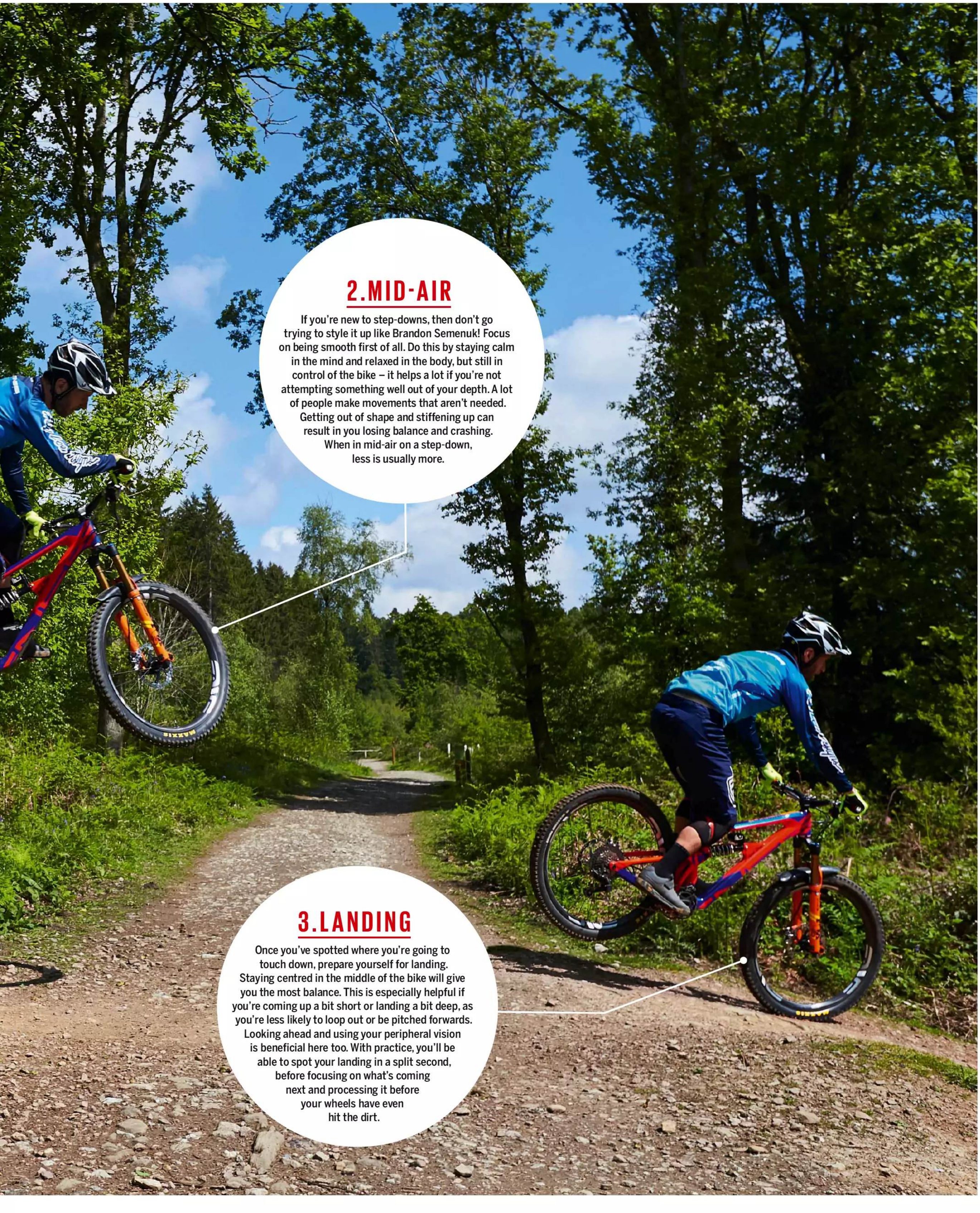
Jumping "that big step-down" at the local trails isn't the be all and end all. People sometimes put bigger step-downs on a pedestal, building them up in their heads to be something more than they are. Learn the basics on smaller, safer features. Then when you're ready for bigger things, you'll be more relaxed and less likely to crash. Roll in, do it and enjoy it! Don't beat yourself up about not jumping a feature if you don't feel ready for it.

PUSH OR JUMP?

This one depends on how fast you're going. In the learning stages you're likely to not be going flat-out, so a bit of a pull-up will be essential. As your confidence and speed increase, you'll start finding you have to pull up less and less. Faster still and you're likely to have to do the opposite, pushing down off the take-off to not overshoot the landing. Watch pro riders at a World Cup and you'll see this is what they're doing – but it's an advanced skill and one to build up to.

JUDGE YOUR SPEED

Watch someone ride the step-down before you, so you can gauge the required speed. Ask their advice or, better still, whether you can follow them in on your first go. Assess the take-off too. Does the lip fade away so you'll need more speed? Or has it got a kick so you can go slower? Think about whether you can safely "case" the landing (come up short) and build up to clearing the gap. If it looks harsh, err on the side of caution until you've got the technique dialled in.



2. MID-AIR

If you're new to step-downs, then don't go trying to style it up like Brandon Semenuk! Focus on being smooth first of all. Do this by staying calm in the mind and relaxed in the body, but still in control of the bike – it helps a lot if you're not attempting something well out of your depth. A lot of people make movements that aren't needed. Getting out of shape and stiffening up can result in you losing balance and crashing. When in mid-air on a step-down, less is usually more.

3. LANDING

Once you've spotted where you're going to touch down, prepare yourself for landing. Staying centred in the middle of the bike will give you the most balance. This is especially helpful if you're coming up a bit short or landing a bit deep, as you're less likely to loop out or be pitched forwards. Looking ahead and using your peripheral vision is beneficial here too. With practice, you'll be able to spot your landing in a split second, before focusing on what's coming next and processing it before your wheels have even hit the dirt.

GET THE DROP ON DROPS

Try these tips to improve your technique

FOCUS

Concentrate on what you have to do. If you have any negative thoughts in your head or any doubts, then find a way to overcome them and focus on what you need to do before attempting a drop.

GET LOW

The lower you can get off the edge, the faster you'll be able to hit the drop, so you won't have to dab the brakes in fear of flying too far. Leaning the bike over just before the edge can give you extra room to get lower, especially on bigger-wheeled bikes.

APPROACH

Stand on the pedals in a neutral position. Stay loose and relaxed, because you're going to need to be dynamic. As you get closer to the edge, look for the landing but keep your head up.

DROP & PUSH

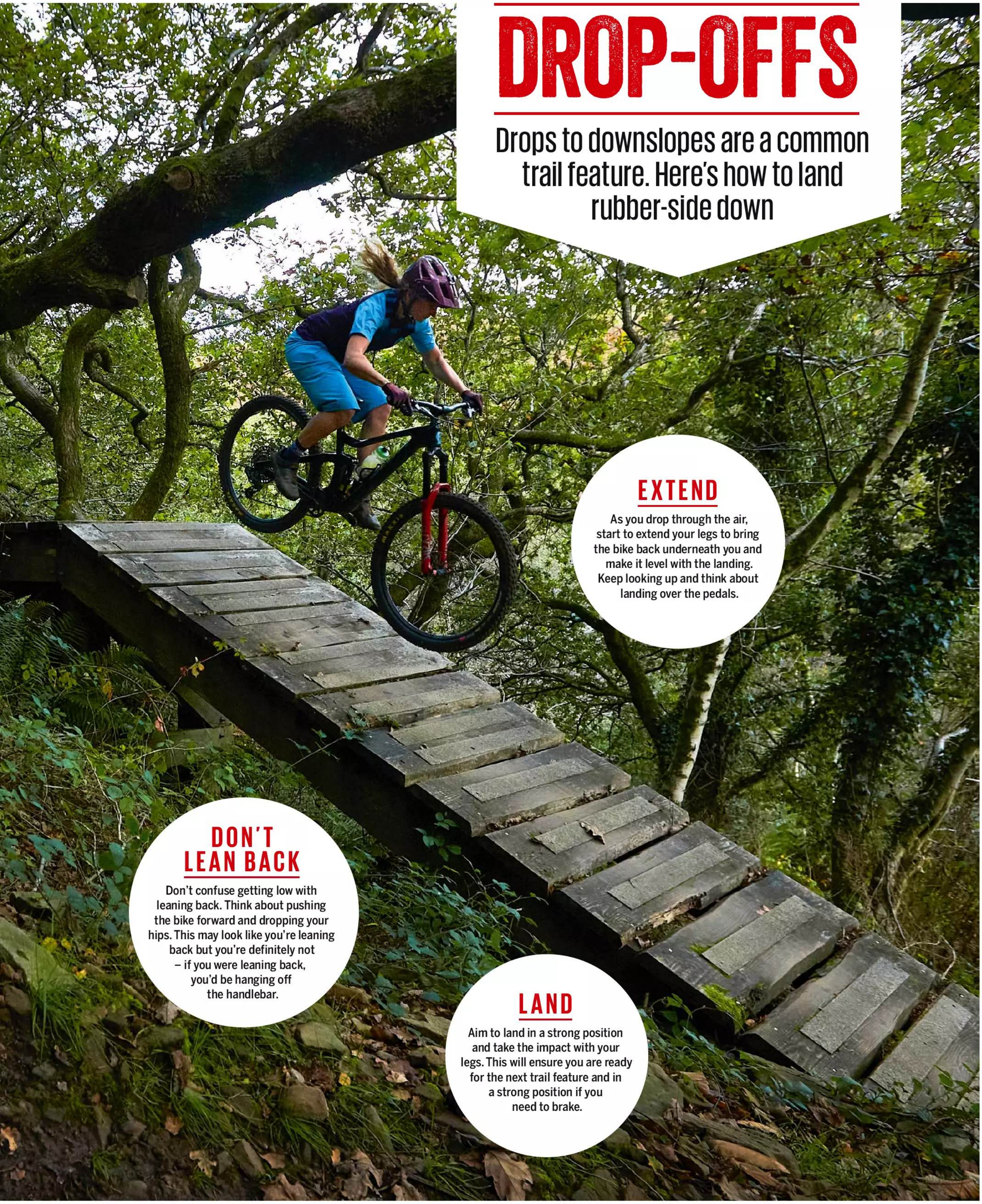
As you approach the edge, drop your body and push your bike forward with your arms. You'll need to time this so that the rear wheel is unweighted as you go over the edge.

THINK SPEED

Set your speed early so you have time to set yourself up for the drop. Roll in at a medium pace to start with. Once you're comfortable, you can try hitting it slower or faster.

DROP-OFFS

Drops to downslopes are a common trail feature. Here's how to land rubber-side down



EXTEND

As you drop through the air, start to extend your legs to bring the bike back underneath you and make it level with the landing. Keep looking up and think about landing over the pedals.

DON'T LEAN BACK

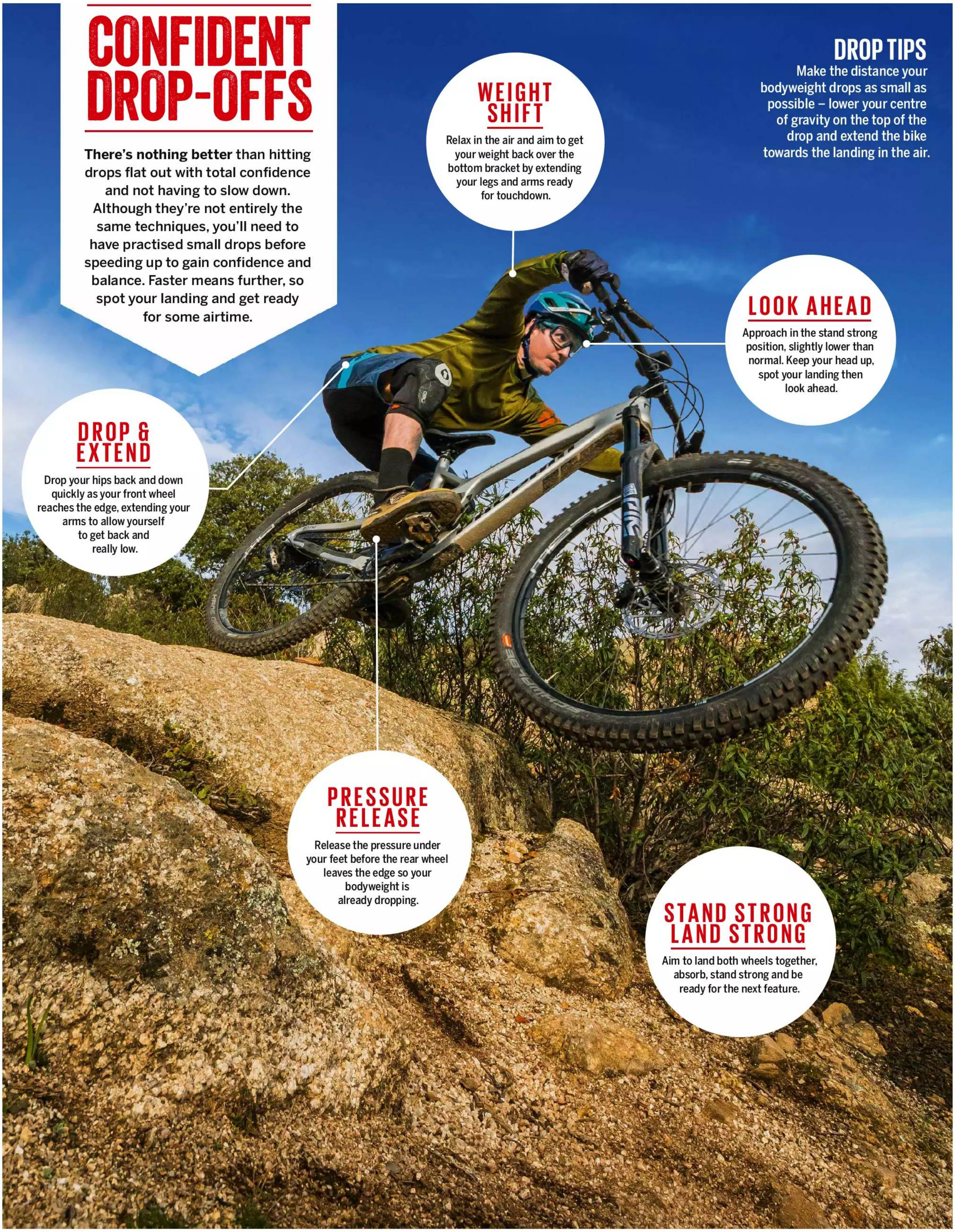
Don't confuse getting low with leaning back. Think about pushing the bike forward and dropping your hips. This may look like you're leaning back but you're definitely not – if you were leaning back, you'd be hanging off the handlebar.

LAND

Aim to land in a strong position and take the impact with your legs. This will ensure you are ready for the next trail feature and in a strong position if you need to brake.

CONFIDENT DROP-OFFS

There's nothing better than hitting drops flat out with total confidence and not having to slow down. Although they're not entirely the same techniques, you'll need to have practised small drops before speeding up to gain confidence and balance. Faster means further, so spot your landing and get ready for some airtime.



DROP TIPS

Make the distance your bodyweight drops as small as possible – lower your centre of gravity on the top of the drop and extend the bike towards the landing in the air.

WEIGHT SHIFT

Relax in the air and aim to get your weight back over the bottom bracket by extending your legs and arms ready for touchdown.

LOOK AHEAD

Approach in the stand strong position, slightly lower than normal. Keep your head up, spot your landing then look ahead.

DROP & EXTEND

Drop your hips back and down quickly as your front wheel reaches the edge, extending your arms to allow yourself to get back and really low.

PRESSURE RELEASE

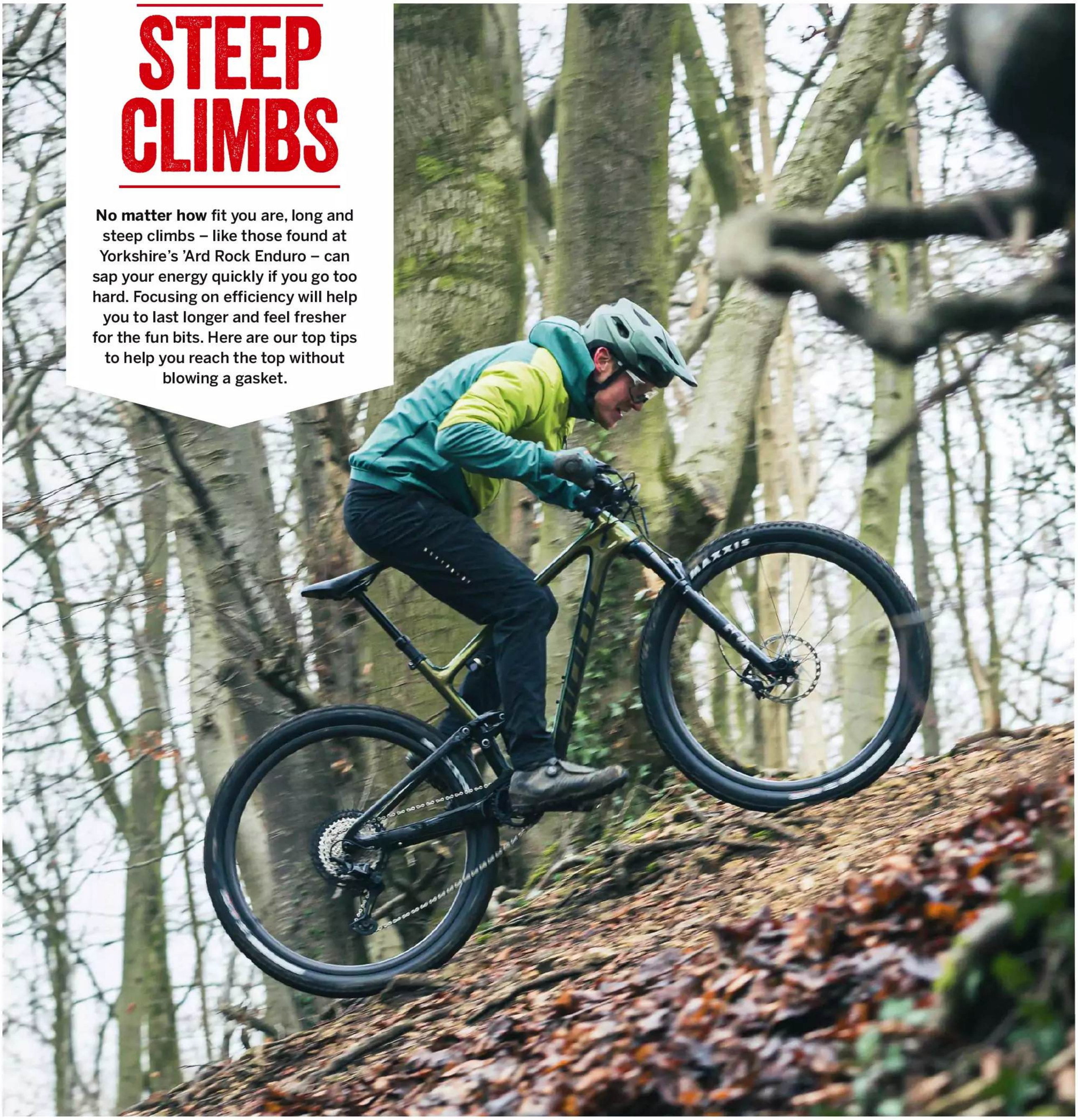
Release the pressure under your feet before the rear wheel leaves the edge so your bodyweight is already dropping.

STAND STRONG LAND STRONG

Aim to land both wheels together, absorb, stand strong and be ready for the next feature.

STEEP CLIMBS

No matter how fit you are, long and steep climbs – like those found at Yorkshire's 'Ard Rock Enduro – can sap your energy quickly if you go too hard. Focusing on efficiency will help you to last longer and feel fresher for the fun bits. Here are our top tips to help you reach the top without blowing a gasket.



1 SPIN

Select an easy gear that allows you to spin your pedals at a relatively high cadence. Aim for around 60rpm (one pedal revolution per second) rather than cranking a hard gear.

2 STAY HYDRATED

You're going to be working hard, which means you'll also be sweating a lot – so it's essential that you stay hydrated. Keep sipping on water or an isotonic sports drink and aim to drink at least 500ml per hour to replace lost fluids.

3 PACE YOURSELF

Ride at your own pace and don't try to keep up with faster riders. Pushing yourself into the red zone, even for a short while, will deplete your energy much quicker.

4 STAY SEATED

Where possible, stay seated and get into a good pedalling rhythm that you feel comfortable with. Save standing up for really steep sections.

5 GET LOW

Lower your chest and tuck your elbows in to get your weight low for a better climbing position.

6 TILT YOUR SADDLE

Most riders have a level saddle, which is great if you ride on level terrain. At enduro races, where most of the pedalling is uphill, tilting the nose of your saddle down can give you a better climbing position.

RIDE FLAT OUT

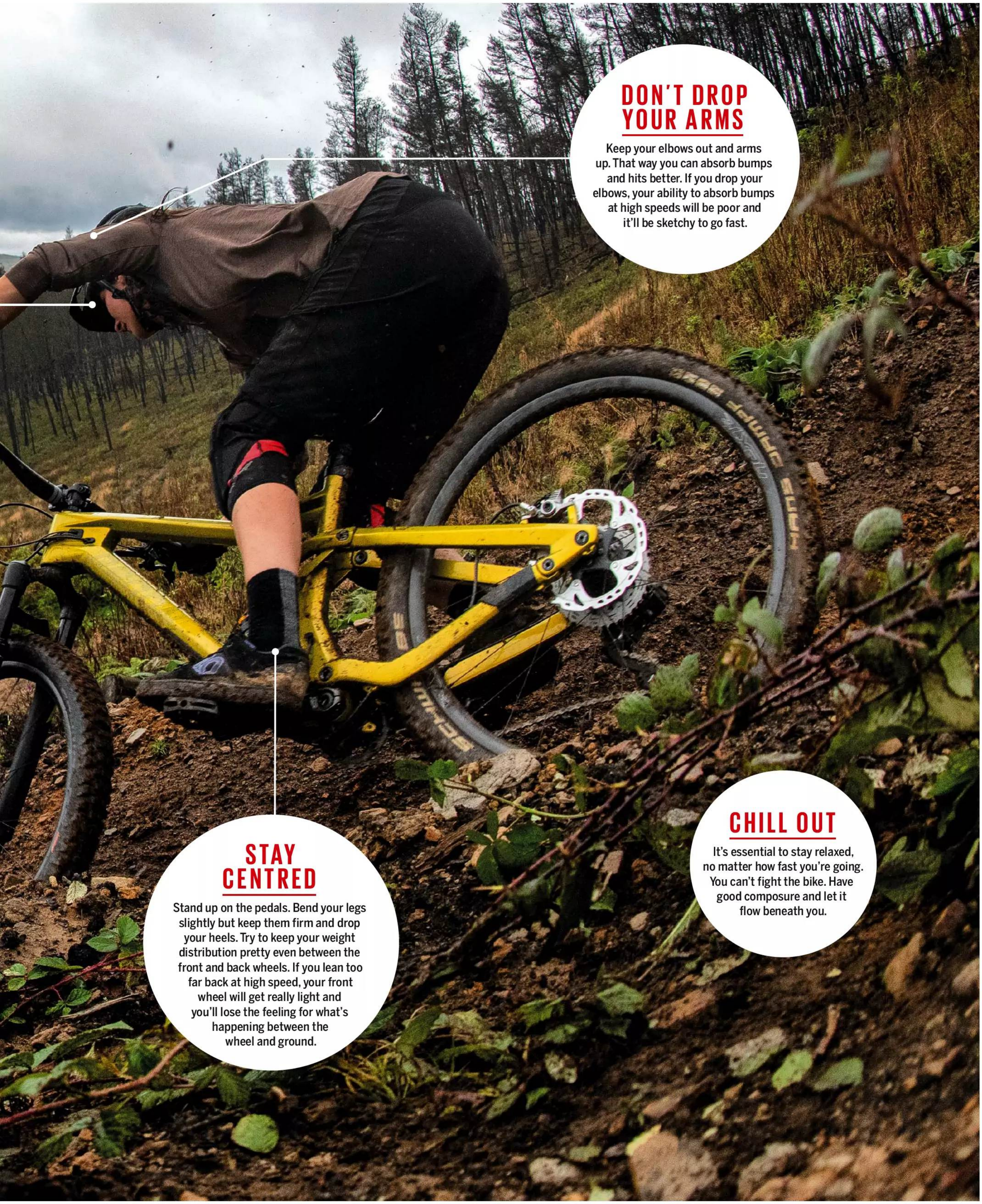
The secrets to hitting your favourite trails faster than ever before

LOOK UP THE TRAIL

Keep your head up and look ahead. You can't go fast if you're looking down at your front wheel. The faster you go, the further up the trail you need to look. Always look where you want to go, not where you don't want to go.

DON'T WAVER

You must be 100 per cent confident in your own ability to ride the section and not hesitate. It helps a little if you know the trail, allowing you to push that bit harder.



DON'T DROP YOUR ARMS

Keep your elbows out and arms up. That way you can absorb bumps and hits better. If you drop your elbows, your ability to absorb bumps at high speeds will be poor and it'll be sketchy to go fast.

STAY CENTRED

Stand up on the pedals. Bend your legs slightly but keep them firm and drop your heels. Try to keep your weight distribution pretty even between the front and back wheels. If you lean too far back at high speed, your front wheel will get really light and you'll lose the feeling for what's happening between the wheel and ground.

CHILL OUT

It's essential to stay relaxed, no matter how fast you're going. You can't fight the bike. Have good composure and let it flow beneath you.

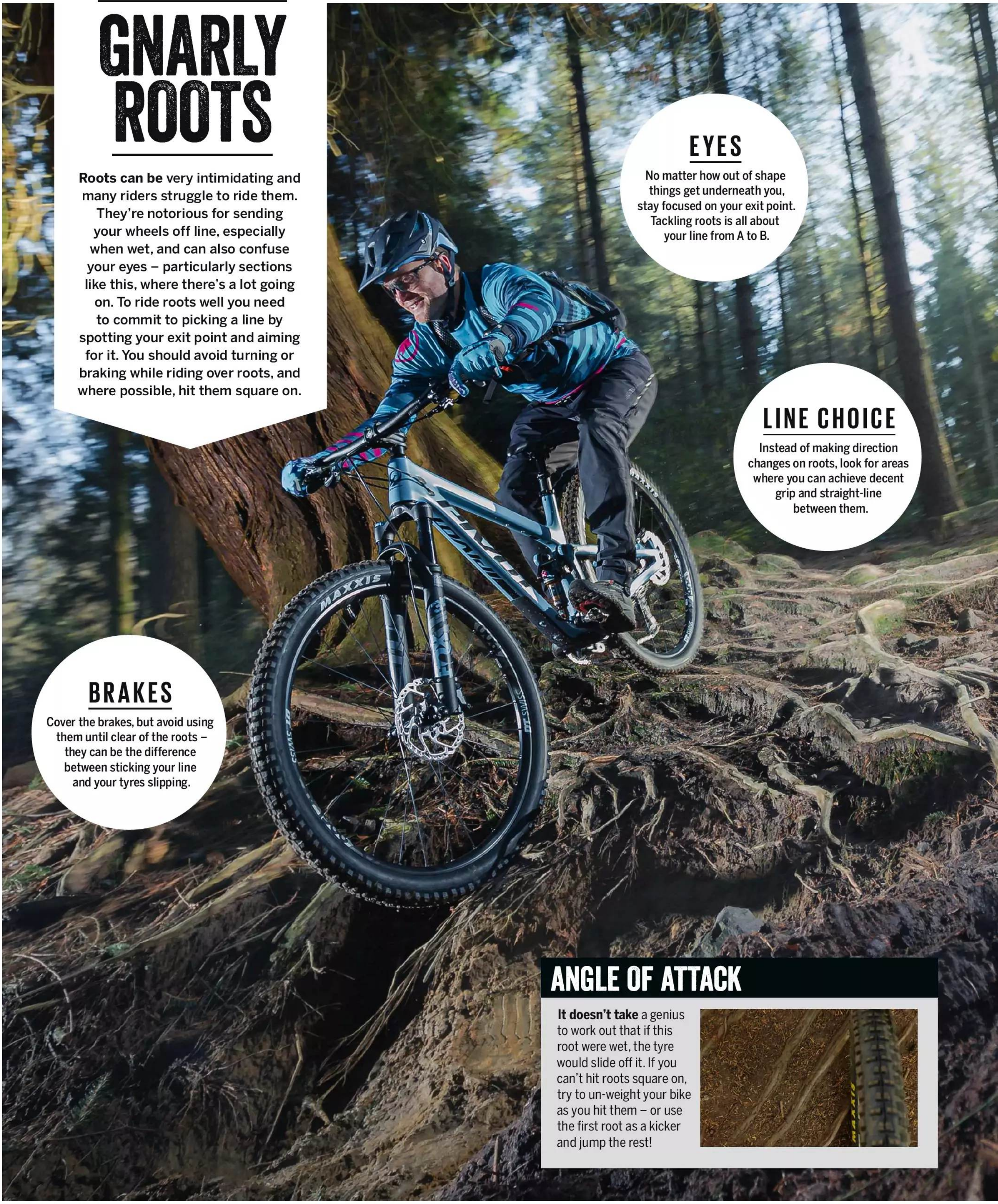
BLACK

Okay, so you're ready to mix it up on the black trails. Read on for the skills you'll need...

TRAIL SKILLS

GNARLY ROOTS

Roots can be very intimidating and many riders struggle to ride them. They're notorious for sending your wheels off line, especially when wet, and can also confuse your eyes – particularly sections like this, where there's a lot going on. To ride roots well you need to commit to picking a line by spotting your exit point and aiming for it. You should avoid turning or braking while riding over roots, and where possible, hit them square on.



EYES

No matter how out of shape things get underneath you, stay focused on your exit point. Tackling roots is all about your line from A to B.

LINE CHOICE

Instead of making direction changes on roots, look for areas where you can achieve decent grip and straight-line between them.

BRAKES

Cover the brakes, but avoid using them until clear of the roots – they can be the difference between sticking your line and your tyres slipping.

ANGLE OF ATTACK

It doesn't take a genius to work out that if this root were wet, the tyre would slide off it. If you can't hit roots square on, try to un-weight your bike as you hit them – or use the first root as a kicker and jump the rest!

JUMPING ROOTS

1 APPROACH

Keeping your speed up, look for your take-off point – in this case the first root. As your front wheel hits it, pull up on the handlebar to bump the bike off the ground. Let the rear wheel follow.

2 PICK UP

Let the bike come up underneath you by keeping your arms and legs relaxed. But stay in the attack position so you're ready to take control the moment you land or in case you get kicked off line.

3 LAND

Extend your arms and legs to push the bike into the landing, like a cat landing from a fall. Keep your eyes focused on the trail ahead. Once you've absorbed the impact, get back into the attack position.

ROCK GARDENS

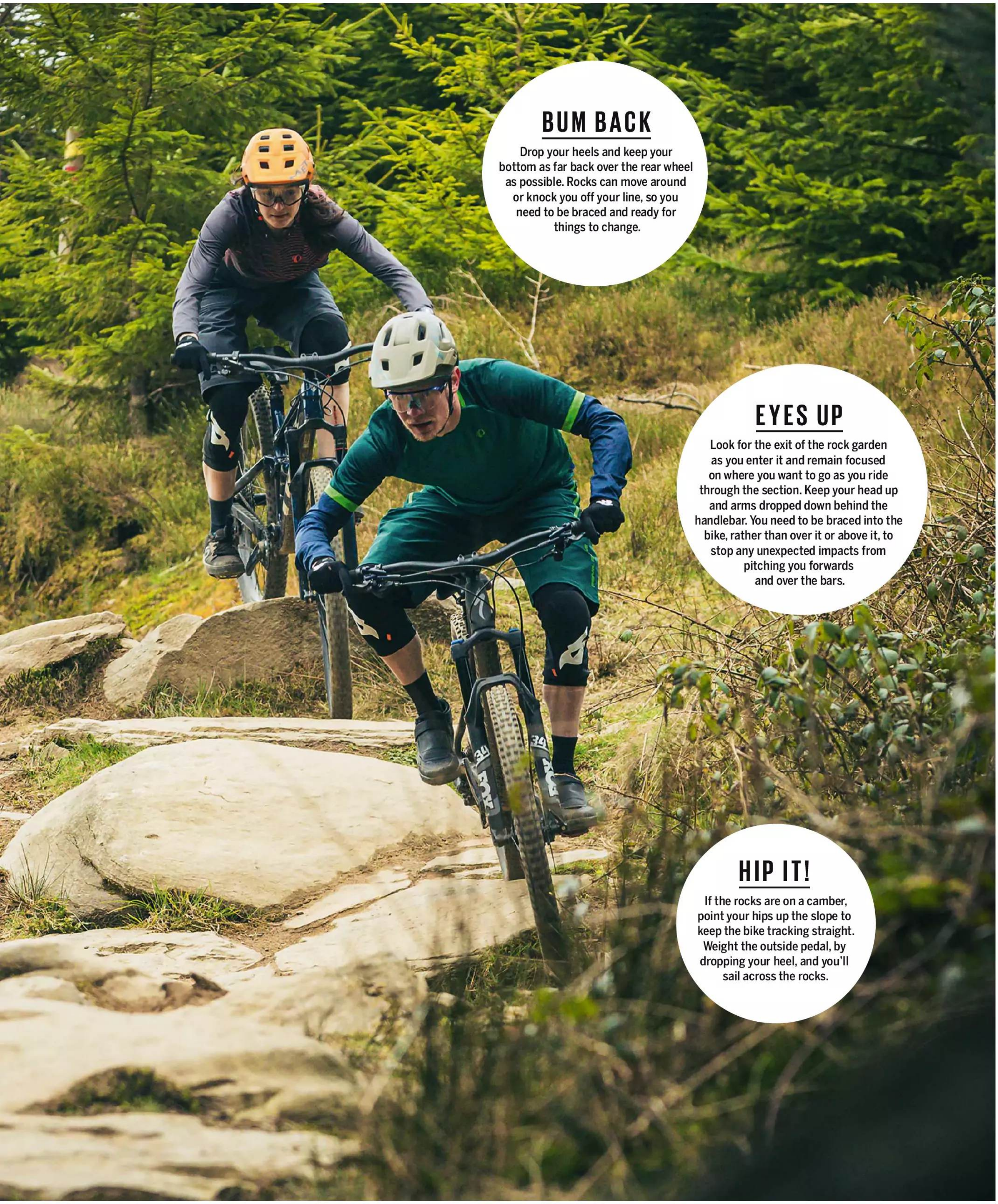
Riding rock gardens well requires a mixture of looseness and strength, fluidity and stability. You need to remain mobile on the bike to deal with the changing terrain beneath your wheels. But if you hit something you're not expecting, you need to be in a strong enough position so that you can absorb it with your hands, wrists and feet.

CONTROL YOUR SPEED

Jabbing your brakes on will disrupt the balance of the bike. By feathering them you can still control your speed without causing the bike to pitch forwards or the tyres to lock up.

BALANCING ACT

In rock gardens where the rocks move as you ride over them, you need to do some balancing with your body to keep your bike heading towards the exit. Use weight shifts to work around any rocks that are changing position, while keeping your bike pointing straight.



BUM BACK

Drop your heels and keep your bottom as far back over the rear wheel as possible. Rocks can move around or knock you off your line, so you need to be braced and ready for things to change.

EYES UP

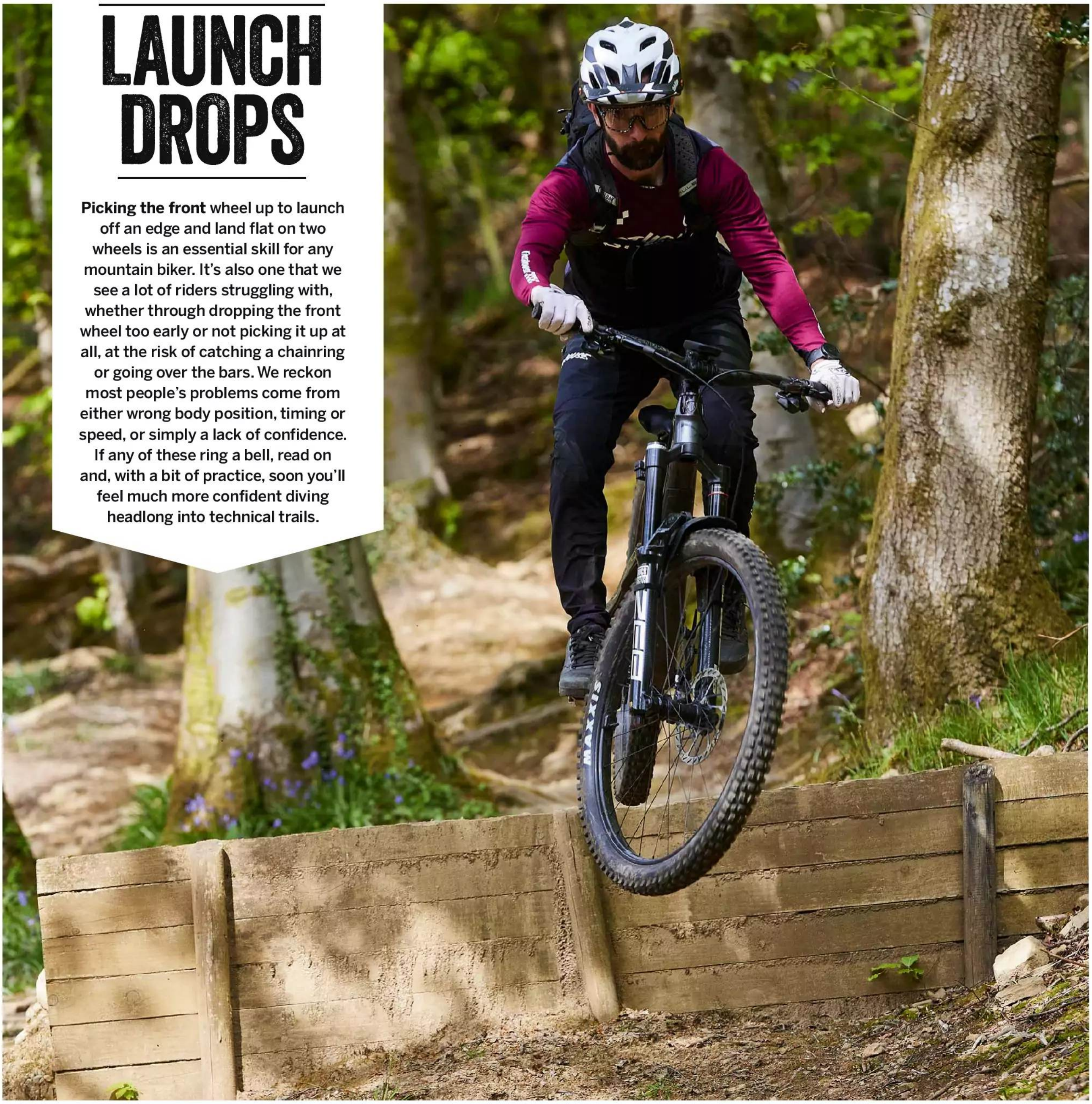
Look for the exit of the rock garden as you enter it and remain focused on where you want to go as you ride through the section. Keep your head up and arms dropped down behind the handlebar. You need to be braced into the bike, rather than over it or above it, to stop any unexpected impacts from pitching you forwards and over the bars.

HIP IT!

If the rocks are on a camber, point your hips up the slope to keep the bike tracking straight. Weight the outside pedal, by dropping your heel, and you'll sail across the rocks.

LAUNCH DROPS

Picking the front wheel up to launch off an edge and land flat on two wheels is an essential skill for any mountain biker. It's also one that we see a lot of riders struggling with, whether through dropping the front wheel too early or not picking it up at all, at the risk of catching a chainring or going over the bars. We reckon most people's problems come from either wrong body position, timing or speed, or simply a lack of confidence. If any of these ring a bell, read on and, with a bit of practice, soon you'll feel much more confident diving headlong into technical trails.



1 TIMING

The two key elements to riding a drop-off are driving your feet forward through the pedals and shifting your weight back in order to make the bar go light and so lift the front wheel. These must be done as one simultaneous movement as you reach the lip of the drop. Too early and you're likely to drop the front wheel before the back wheel has cleared the lip. If you just try to pull up on the bar without changing your body position, you'll struggle to lift the front wheel.

2 FIRST STEPS

Playing in the street might sound a bit juvenile, but a kerb or small step is definitely the best place to learn drops. The definite edge gives you a clear cue for when to initiate the movement, but the height isn't so big that if you don't manage it you'll clip your chainring. Get the basics dialled here and then start increasing the size of the drops to build confidence.

3 SPEED IS YOUR FRIEND

Well, relatively speaking – you need to approach the drop with enough speed to easily generate the upward momentum required. Creeping off the edge too slowly means you'll have to really yank back on the bar or add a pedal stroke to lift the front wheel, and makes side-to-side balance harder too. Similarly, don't go in flat out, as your speed and trajectory will do the work for you and you won't learn the proper technique.

4 FASTER AND BIGGER

Whether you're plopping off a kerb or sending a cliff at Red Bull Rampage, the principles stay the same. Once the mechanics become second nature, you can concentrate on spotting your landing. Going at full speed into a drop that doesn't have a gap (ie. not a step-down), you'll find you actually need to push down on the bars a little to scrub the drop so your bike meets the landing earlier, rather than thinking about lifting the wheel up as you would when learning.

RIP ROCKS & SURF SCREE

Head out to the hills on the hunt for natural descents and you're almost guaranteed to come across loose, rocky terrain. When the ground starts sliding around under your wheels, it's easy to get out of shape, lose control and crash – and crashing on this stuff hurts! Follow these tips, though, and you'll be skipping across shifting rocks with unfaltering composure.

HEAD UP EYES UP

We're all guilty of this to some degree – looking at the front wheel and not at what's coming up. When you're attacking high-speed, rocky straights, you want to consciously look further forward, so you can spot your line. Look for the path of least resistance – often where there's water flowing.

EASY ON THE BRAKES

Set up early and do your turning and braking on more solid ground. If you do have to brake mid-section, be gentle and feather the levers. Control your speed when the bike's straight and upright, otherwise it can disappear from under you in an instant.

STAY LOOSE

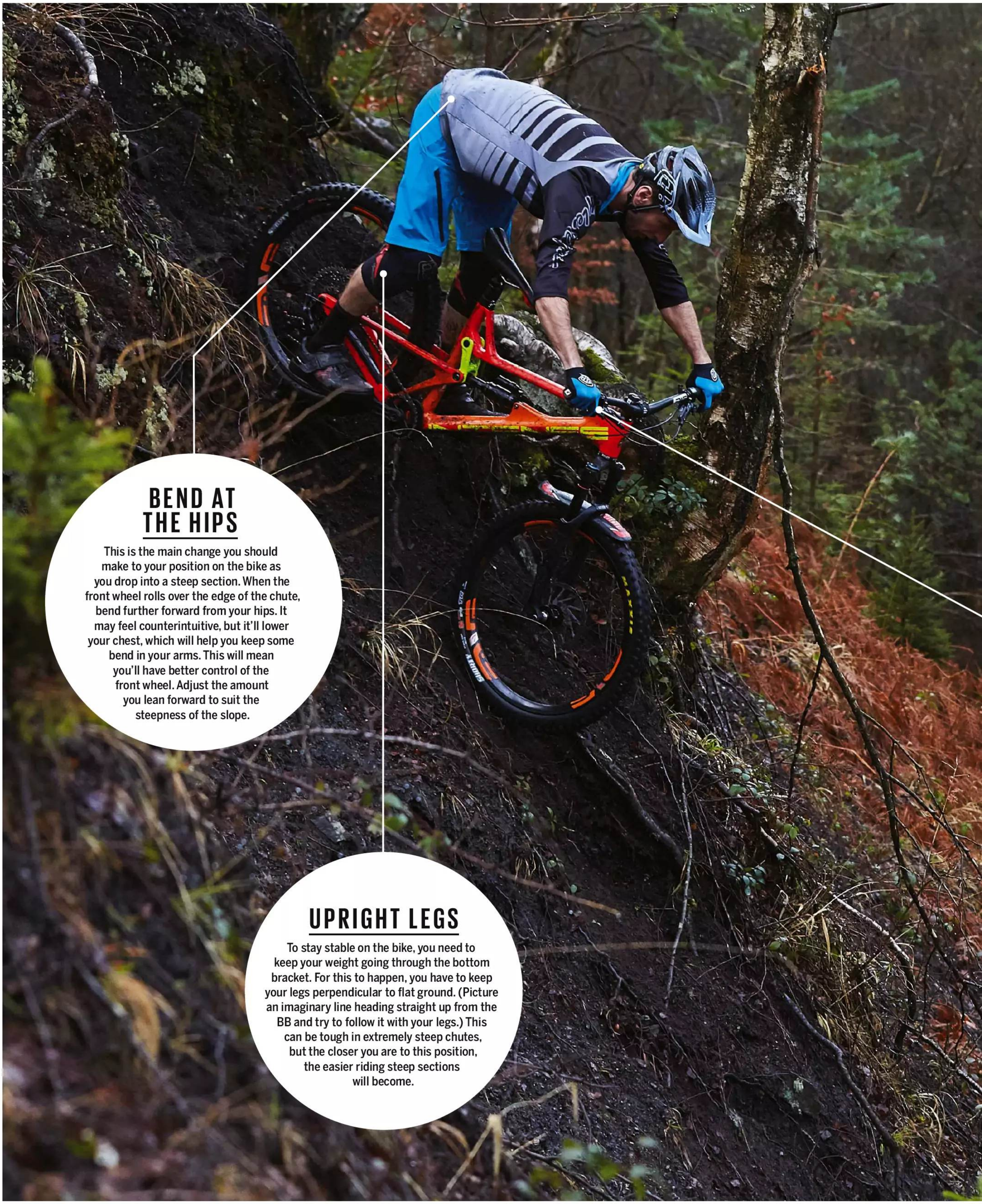
It's the key to riding confidently in many situations, but it's never truer than here. If you're calm and relaxed, then the bike is free to move around beneath you. If you stiffen up, then whenever the bike is deflected, the force will be transmitted straight through to you, knocking you off-balance.

CARRY SOME MOMENTUM

We're not saying you should barrel headlong into sections with reckless abandon, but you'll find that a little more speed will help your wheels to surf over the rocks, rather than getting hung up in the holes between them.

DROP A FOOT

When the ground is loose and uneven, trying to keep traction and corner with your feet up is unpredictable at best. Sometimes the best way is to grab a handful of back brake, drop a foot and slide your wheels through the scree. It's always fun and is sometimes the fastest and safest way too!



BEND AT THE HIPS

This is the main change you should make to your position on the bike as you drop into a steep section. When the front wheel rolls over the edge of the chute, bend further forward from your hips. It may feel counterintuitive, but it'll lower your chest, which will help you keep some bend in your arms. This will mean you'll have better control of the front wheel. Adjust the amount you lean forward to suit the steepness of the slope.

UPRIGHT LEGS

To stay stable on the bike, you need to keep your weight going through the bottom bracket. For this to happen, you have to keep your legs perpendicular to flat ground. (Picture an imaginary line heading straight up from the BB and try to follow it with your legs.) This can be tough in extremely steep chutes, but the closer you are to this position, the easier riding steep sections will become.

STEEP CHUTES

"Hang off the back! Hang off the back!" – We often hear this being shouted at riders by their mates as they try to ride steep sections. But hanging off the back of the bike makes chutes dangerous for several reasons. It gives you zero front wheel grip, bucks you forward if you hit a bump and gives you the least amount of stability on the bike. So, what should you do to make sure you get max grip, zero bucking and complete stability?

LESS FRONT BRAKE

The front brake is useful, but in situations like this, it can be the devil. Using it in steep sections generally puts you and the bike out of balance, especially when the trail is loose or rutted, so try to use it less. If you're trying to ride a rut, applying the brake can drag the wheel out of it. Practise modulating your braking so you can use less front brake.

STEEP SKILLS

PUTTING IT TOGETHER

Approaching the chute, make sure you have a solid posture on the bike, with elbows bent, weight through your heels, legs straight but supple and hips bent. As you roll into it, keep your legs as they are and allow the bike to pivot forward by bending more at your hips. Modulate your braking so you use less front brake than rear. With all these actions combined, you should have great grip and stability.

REACTING TO TRAIL FEATURES

You need to be able to squash (allow the bike to come up to you – check out pages 36 and 37 for more info) and pump (push the bike into the terrain – see page 34) over undulations while riding the chute. Try to keep your legs extended, because this will give you the space to squash and pump when you get to the bumps.

SCRUB JUMPS

Squashing or scrubbing jumps is more than just a way to look cool. If you can hit a take-off at full speed and stay low in the air so you don't need to brake, then you're going to reach the finish line faster! The term 'scrub' comes from motocross in the early 2000s when James 'Bubba' Stewart first pioneered the 'Bubba Scrub' – leaning his bike over and sliding the wheels up the take-off, to take jumps at full-gas without overshooting the landing. As mountain bikers, we obviously don't have an engine on our bikes, so the scrub doesn't translate directly, but the principles are similar. Read on to find out how it's done!

THE SQUASH

1 **Before you try** to get sideways, start by working on squashing jumps smoothly. Approach the take-off in the attack position and with your weight central on the bike. As soon as your front wheel reaches the lip and starts to lift off, instead of using the transition to pop upwards, push the bike forwards, by extending and straightening your arms, to keep the front wheel down. Locking your elbows out will prevent the front end from dropping too low and going into a nose-dive.

2 **When your back** wheel reaches the lip, you need to absorb the upward momentum with your legs and then, in mid-air, extend them down to push the bike back towards the floor. The whole movement should feel like you're going forwards rather than straight upwards.

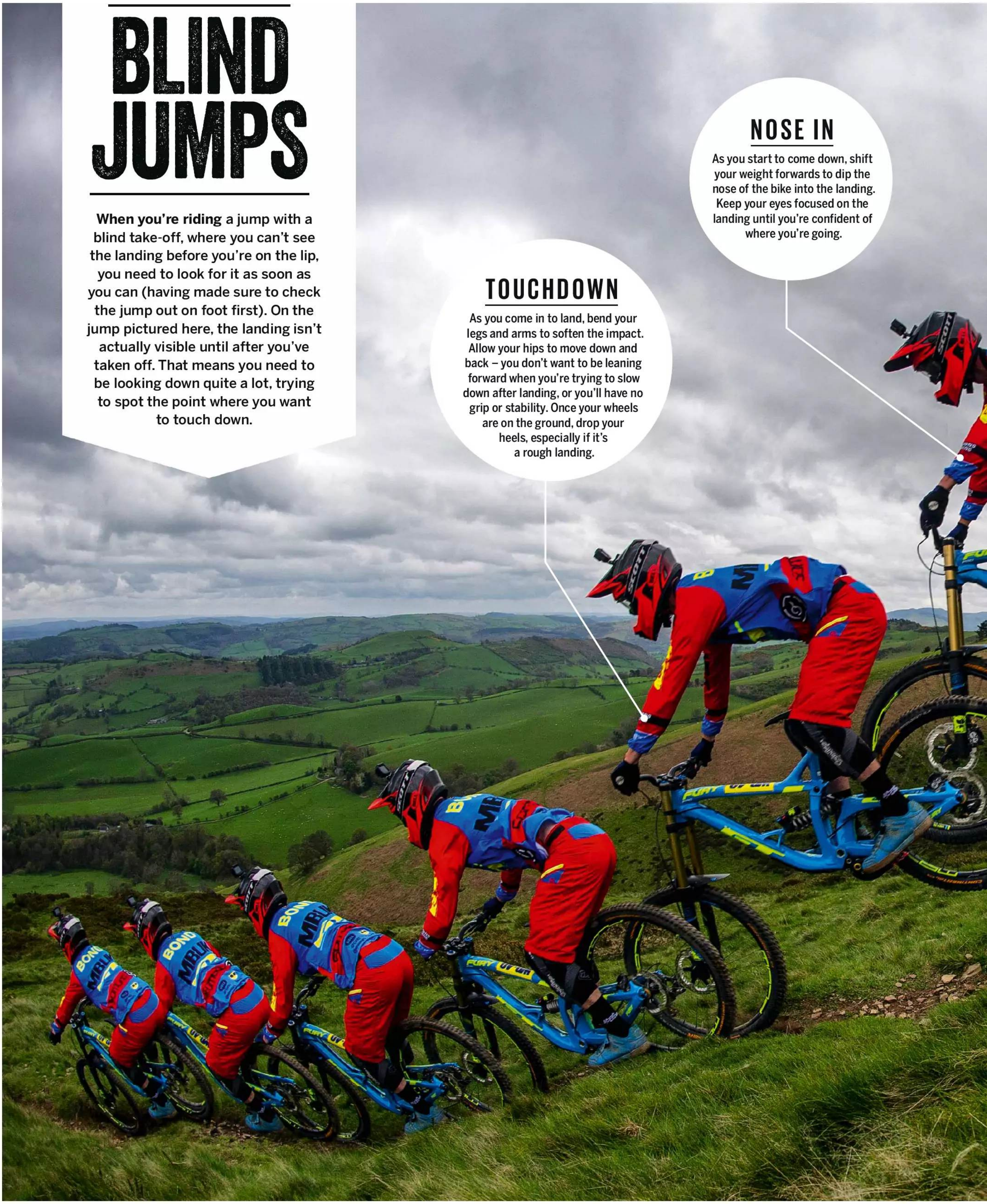
TURNING IT INTO A SCRUB

1 **Ride into the** jump as before, in the same attacking position. But this time, as your front wheel takes off, you need to turn your bar and drop the opposite pedal from the direction you've just turned in. This helps to get the bike leant over, and the further you can lean it, the lower and faster you can go without over-jumping. Your aim should be to get your bar as close to vertical as possible, with one end pointing towards the floor and the other towards the sky.

2 **Coming into land** is simpler than you might think. Just level out your cranks while you're still airborne and point the front wheel in the direction you want to go. Everything else will follow. Of course, it takes practice and, because it all happens so fast, this is a technique that takes time to perfect. But trust us, there's no better feeling once you've got it dialled! You can use it on both jumps and drops to look super-stylish while still going flat-out. Good luck!

BLIND JUMPS

When you're riding a jump with a blind take-off, where you can't see the landing before you're on the lip, you need to look for it as soon as you can (having made sure to check the jump out on foot first). On the jump pictured here, the landing isn't actually visible until after you've taken off. That means you need to be looking down quite a lot, trying to spot the point where you want to touch down.

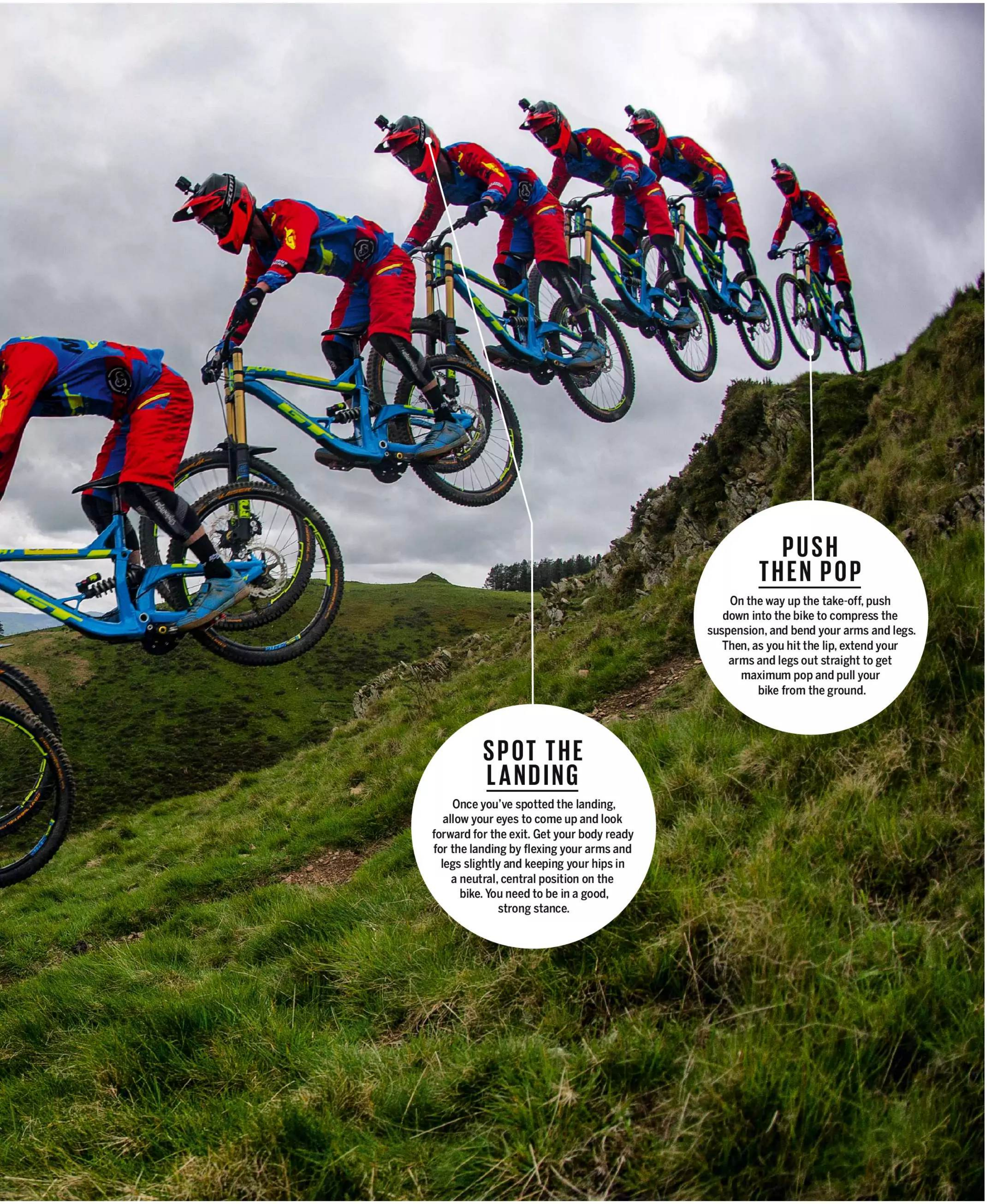


TOUCHDOWN

As you come in to land, bend your legs and arms to soften the impact. Allow your hips to move down and back – you don't want to be leaning forward when you're trying to slow down after landing, or you'll have no grip or stability. Once your wheels are on the ground, drop your heels, especially if it's a rough landing.

NOSE IN

As you start to come down, shift your weight forwards to dip the nose of the bike into the landing. Keep your eyes focused on the landing until you're confident of where you're going.



PUSH THEN POP

On the way up the take-off, push down into the bike to compress the suspension, and bend your arms and legs. Then, as you hit the lip, extend your arms and legs out straight to get maximum pop and pull your bike from the ground.

SPOT THE LANDING

Once you've spotted the landing, allow your eyes to come up and look forward for the exit. Get your body ready for the landing by flexing your arms and legs slightly and keeping your hips in a neutral, central position on the bike. You need to be in a good, strong stance.

GAPS & DOUBLES

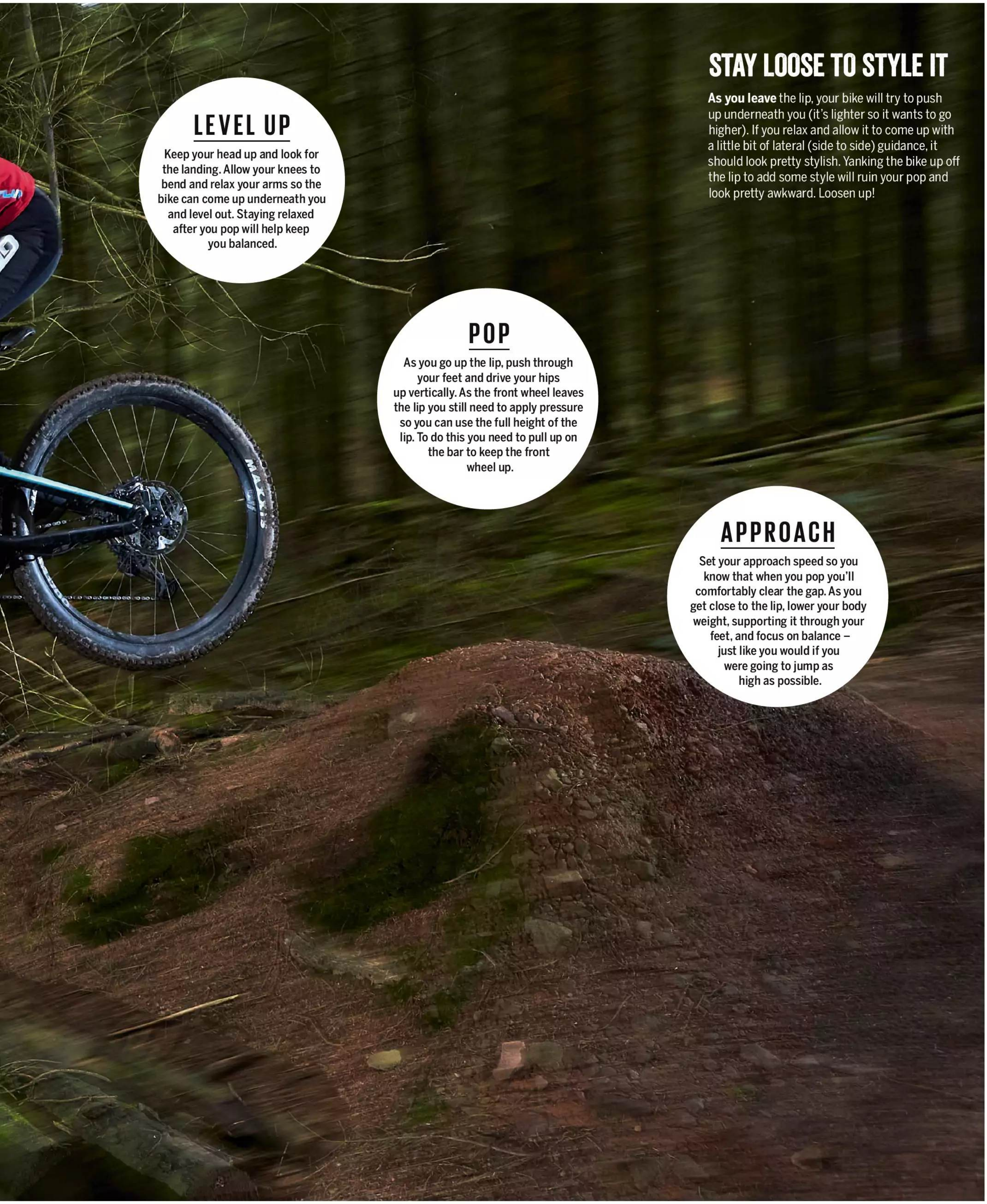
Gap jumps and doubles found on black trails and in freeride parks can be daunting, and many riders resort to just using speed to clear them. Though this works sometimes, it's a pretty dangerous approach and means you always have to ride flat-out to clear jumps. There are effectively three ways to clear a jump – squashing it, jumping off it and popping off it. Which one to use depends on the size of the jump and your speed. Popping is effectively jumping off the very last part of the lip to gain height, and is the method we'd recommend mastering before trying to clear doubles. Once you know you can pop, you'll have the confidence and experience to start sending gap jumps.

ABSORB

Try to absorb the impact of landing with your legs and aim to return to your neutral position over the bike as quickly as possible.

LAND

Aim to land both wheels at the same time. This may mean you have to push the front end down a little bit. Think about landing on your feet and keeping your hands light.



STAY LOOSE TO STYLE IT

As you leave the lip, your bike will try to push up underneath you (it's lighter so it wants to go higher). If you relax and allow it to come up with a little bit of lateral (side to side) guidance, it should look pretty stylish. Yanking the bike up off the lip to add some style will ruin your pop and look pretty awkward. Loosen up!

LEVEL UP

Keep your head up and look for the landing. Allow your knees to bend and relax your arms so the bike can come up underneath you and level out. Staying relaxed after you pop will help keep you balanced.

POP

As you go up the lip, push through your feet and drive your hips up vertically. As the front wheel leaves the lip you still need to apply pressure so you can use the full height of the lip. To do this you need to pull up on the bar to keep the front wheel up.

APPROACH

Set your approach speed so you know that when you pop you'll comfortably clear the gap. As you get close to the lip, lower your body weight, supporting it through your feet, and focus on balance – just like you would if you were going to jump as high as possible.

SEND BIG JUMPS

Even if you're a frequent flyer, there are a few things to consider when hitting the big stuff. Good technique, a properly set up bike and nerves of steel are all essential if you're to make it safely to the landing.

FLYING HIGH

You'll soon realise if things are going pear-shaped. If so, think about bailing and throwing the bike to one side – you don't want to crash down in a tangled mess. Hopefully things are going well and you can concentrate on spotting your landing. The best thing about big jumps is how much airtime there is. So, once you get comfortable, have some fun and throw some whips!

SCOPE IT OUT

Size things up. Don't even consider going for the jump unless you're 99 per cent confident you'll land it. The more jumps you do, the better your gauge of speed will be. Look for cues on how fast to go – a set-up jump before the main jump can really help with this. Watch other people hit it and look at how their bikes and bodies react. Don't be afraid to ask other riders for advice, and always do a few test run-ins before hitting it for real.

THE TAKE OFF

Read the take-off – does it look kicky or will you need to pull back off the lip? Once you commit to it and are past the point of no return, resist the urge to panic and stiffen up. Stay relaxed (easier said than done, we know!) and treat it like any other jump. The good thing with big take-offs is that the transitions are longer and generally more predictable.

LANDING

This is the easy bit. Straighten the bike out from whatever rad shape you're throwing and aim for the downslope. Hopefully you're not coming up short or going long. If you are, then brace yourself for impact. Collect the kudos from your mates and push up for another go.

AIRTIME TIPS

1.START SMALL

It sounds obvious, but don't start eyeing up massive senders before getting comfortable on smaller jumps. If you bite off more than you can chew, it's likely to result in a big crash that'll not only potentially injure you but could seriously dent your confidence in making any kind of jump.

2.BIKE SET-UP

Pump up the tyres so they roll faster. Firm up the suspension by adding some air and/or low-speed compression damping (or a couple of turns of preload, on a coil fork/shock) to help you pump the take-off. On steep take-offs, slow the rebound down so you don't get bucked.

3.HEAD GAME

The mental aspect of going big has to be nurtured too. Make a point of trying something that scares you a bit on every ride and hit lots of jumps to keep your skills sharp. It'll all help you feel confident when you turn up at a new spot and are faced with something scary.

E-BIKE SKILLS

Specific techniques for motor assisted riders

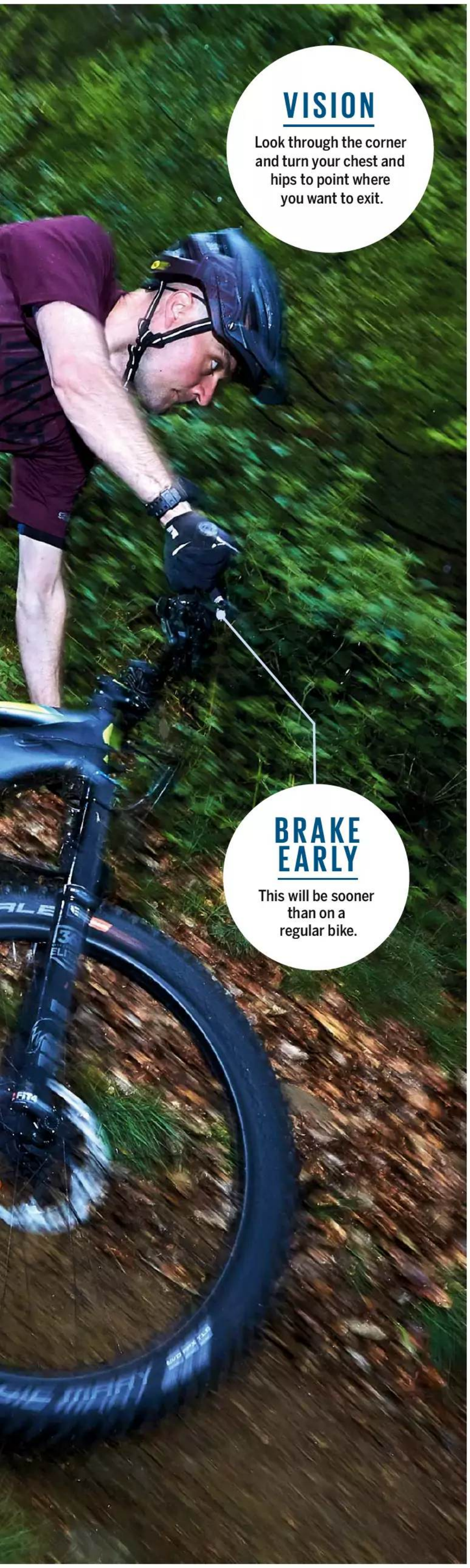
E-bikes give a completely different perspective to a mountain bike ride. Providing the opportunity to explore further, tackle more technically challenging climbs, conserve energy or just keep up with other riders who are faster or more skilled, they're a great tool to help you enjoy your rides and broaden your horizons. Maximising the benefits of the motor and using the weight that comes with this to your advantage requires a slightly modified approach, though. Good bike set-up will help, of course, plus there are specific technical skills to focus on to help you keep traction and improve control – so read on to find out how to rail the trails on your e-bike!

CORNERING

Good cornering technique is rewarded massively on an e-bike, but punished equally if you get things wrong because the heavier bike will stand up in turns more readily. Follow these tips for fast-flowing corner speed.

PEDAL POSITION

Don't automatically drop the outside pedal. This can put the bike off-balance if done too early or if riding through a banked corner. Keep the pedals level in these situations, and save dropping the outside pedal for flat or off-camber turns, where you'll lean the bike over and weight the outside pedal to make the tyres dig in.



VISION

Look through the corner and turn your chest and hips to point where you want to exit.

BRAKE EARLY

This will be sooner than on a regular bike.

JUMPING

E-bikes are great for jumps, but good timing and correct body position are needed to stay in control.

SET A MODE

Boost will be too snatchy, Trail is great for short run-ups, but Eco may be best in some situations.

USE THE SUSPENSION

With well-set-up suspension you can get a good pump from the jump's transition, so use this to your advantage and shift your body weight up and forward as you approach the lip. Don't sit back, because this can potentially cause the bike to buck you as the suspension rebounds.

SUSPENSION

With the added weight and inertia of an e-bike, suspension is challenged more, so a poor set-up becomes a bigger hindrance.

INITIAL SET-UP

Set the sag on the fork and shock (15-25% at the front and 20-30% at the rear is a good starting point) and keep a note of your air pressures. Also, make sure the suspension is balanced, front to back.

TUNING

Most forks and shocks have a big range of usable rebound and compression damping adjustment. Air pressure should be your first go-to if things don't feel right, but e-bikes can be under-damped, so fitting volume spacers to resist bottom-out or adding low-speed compression to help with pumping can transform the ride.

FLAT PEDALS

If you use clipless pedals, now might be the time to try flats again. On an e-bike, the efficiency of being clipped in isn't as important, and flats promote better technique.

BAD HABITS

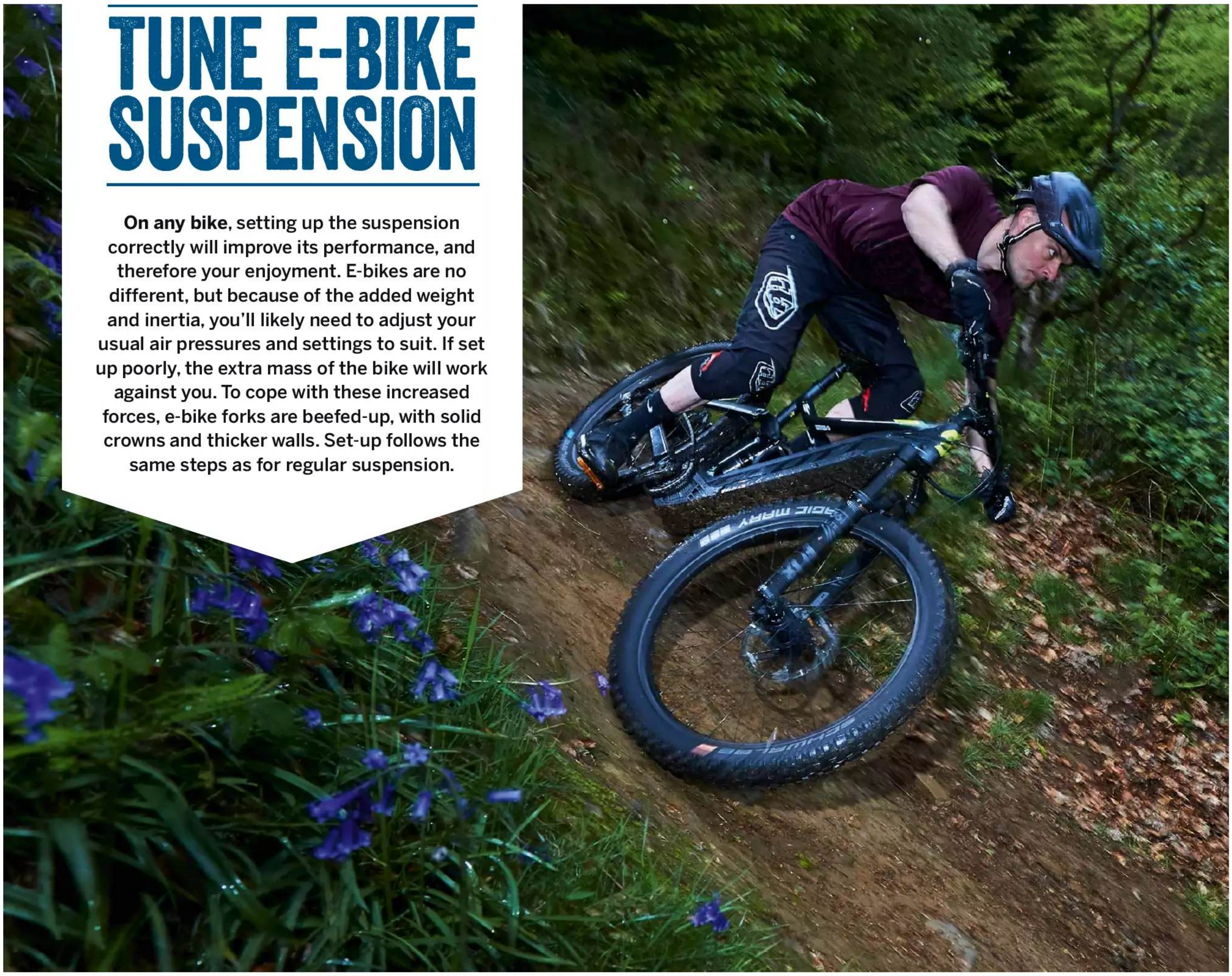
Technical sections may instigate bad habits where you unclip early, just in case. The added confidence of flat pedals allows you to stay feet up, knowing you can quickly dab if things start to go south.

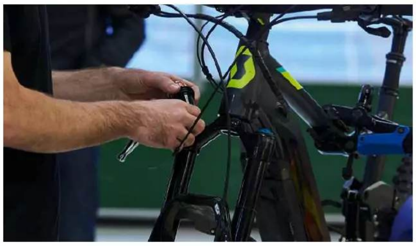
NO CHEATING

We often see people using clipless pedals to pull their bike up. With flats you have to learn to use proper technique for jumping, bunnyhopping, and so on, which will stand you in good stead.

TUNE E-BIKE SUSPENSION

On any bike, setting up the suspension correctly will improve its performance, and therefore your enjoyment. E-bikes are no different, but because of the added weight and inertia, you'll likely need to adjust your usual air pressures and settings to suit. If set up poorly, the extra mass of the bike will work against you. To cope with these increased forces, e-bike forks are beefed-up, with solid crowns and thicker walls. Set-up follows the same steps as for regular suspension.





INITIAL SET-UP IS KEY

Achieve the correct sag by adjusting the air pressure or spring rate. Only use any compression adjustment for fine-tuning. High-speed (HS) damping controls how the bike reacts to trail feedback (braking bumps, landings). Adding HS compression damping makes the suspension harder and reduces fork dive (which negatively affects handling on steep tracks under braking), but inhibits oil flow, so use it sparingly. Low-speed (LS) damping controls how the bike reacts to rider inputs (pumping, pedalling). Small increases in LS compression damping can help you carry speed. Set the rebound damping fast enough that the suspension doesn't pack down, but not so fast that the bike pings off obstacles.

SIMPLE SUSPENSION TUNING

Your e-bike will come set up to cater for a wide range of rider weights and riding styles, but there's an easy way to make it work better for you as an individual. If you find the fork or shock bottoming-out or diving too much, you can reduce the internal air volume to increase progression. This is done by adding volume spacers, so you can avoid increasing air pressure and sacrificing small-bump sensitivity. Similarly, if you find you're not getting full travel, think about removing a spacer. Changing the volume spacers in a fork or shock is easy and instructions are readily found on manufacturers' websites. It can be a simple, cheap and effective way to transform your e-bike's ride.

PROFESSIONAL REVALVE & SERVICE

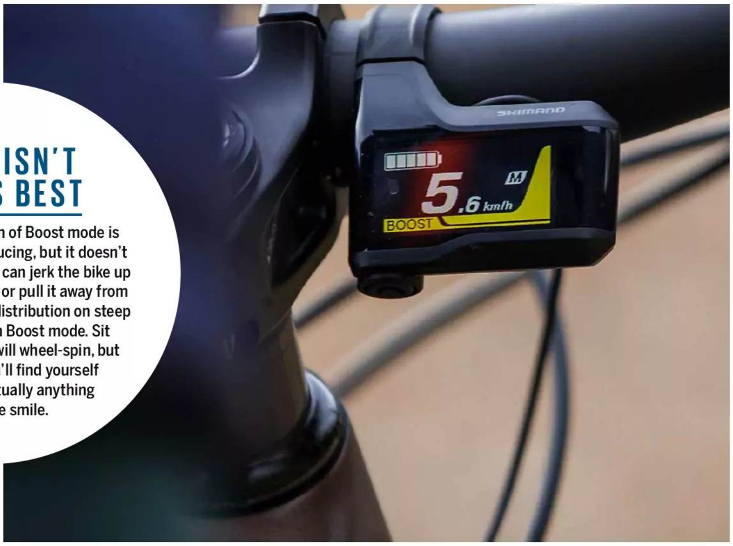
Some e-bikes come fitted with shocks that haven't been specifically tuned to handle the extra motor and battery weight, and if you buy an aftermarket damper, it likely won't have been optimised for your bike's specific leverage ratio. If you can't achieve an optimal set-up using the basic steps or you find yourself at the extremities of the external adjusters, then consider a professional revalve. Not only will a service centre be able to refresh the oil and seals and make them feel like new, they can also adjust the valves or shim-stack to suit. Let them know your body weight, what bike you ride and your riding style, and they'll be able to work miracles (within reason) and give you the perfect suspension set-up.

USE YOUR BIKE'S MODES

E-bike motors can be set to deliver power in different ways. Whether you're using a Bosch, Shimano or Specialized system, or one from another brand, the choice of modes will be similar, even if they're named differently. Eco, Trail/Tour and Boost/Turbo are the standard ones, but Bosch and Giant have additional automatic modes that adjust the power depending on the input going into the bike. The first thing that most people do when jumping on an e-bike is to set the mode to Boost and leave it there. In Boost, the initial drive and acceleration is so far removed from a normal bike that you can't help but grin, but it isn't the best way to get the most from the bike, and will in fact work against you in some situations.

LET TERRAIN DICTATE MODE

E-bikes have an assistance speed limit of 15.5mph (25kmh), above which power cuts off. Exceed this and you'll suddenly feel like you're trying to self-propel a very heavy bike. Flat fireroads or gradual climbs can easily be ridden in Eco for great economy and smooth power. Steep banks may be best tackled in Boost, but you'll be hindered on tight switchbacks, where the strong power can jerk the bike forward and encourage the front wheel to run wide.



BOOST ISN'T ALWAYS BEST

The initial acceleration of Boost mode is without doubt grin-inducing, but it doesn't always work with you. It can jerk the bike up to the assistance limit, or pull it away from you in corners. Weight distribution on steep climbs is key when in Boost mode. Sit forward and the bike will wheel-spin, but get it right and you'll find yourself able to ascend virtually anything with a huge smile.

GEARING IS KEY

The motor will assist you most when your cadence is high, so adjust your pedalling and gearing to achieve 80 to 90 crank revolutions per minute. This will likely feel significantly quicker than what you're used to pushing uphill on a conventional bike, but when you find the sweet spot, the bike will winch you up hills and purr along paths much more effectively than in a harder gear, where the motor gives less assistance.

ECO DOESN'T MEAN LESS FUN

Eco mode allows much larger distances to be covered, and although the power assistance is reduced, for many situations it's more than adequate. It's easy to sit in a higher mode on the transitions between descents or on long easy climbs, but this will flatten the battery more quickly. Leaving the bike in Eco will give you steady assistance at a sustainable pace and allow you to save power for when you need it and can enjoy it most.

CONQUER THE CLIMBS

Never before has climbing been so much fun! E-bikes truly make the ascents as enjoyable as the descents, with the motor assistance really rewarding good technique and allowing seemingly unsurmountable climbs to be conquered with ease. However, get your position wrong and you'll end up pushing a very heavy bike up a steep hill. Here are some points to bear in mind.

BODY POSITION

Putting weight over the rear wheel will give grip and drive. If you lean too far forward, the wheel will just spin and lose traction. Think about sitting on the saddle and looking way ahead while selecting a suitable gear and mode for the steepness of the climb.

SIT OR STAND?

You may have to rethink the way you approach climbs. On a normal trail bike you sometimes need to stand up in order to power up a hill, but an e-bike will often benefit from you staying seated, to keep weight over the rear wheel. Patience is key here. Trust that the motor will assist. You may feel as though steep climbs are ascended very slowly, but at least it's done surely.

PRACTISE!

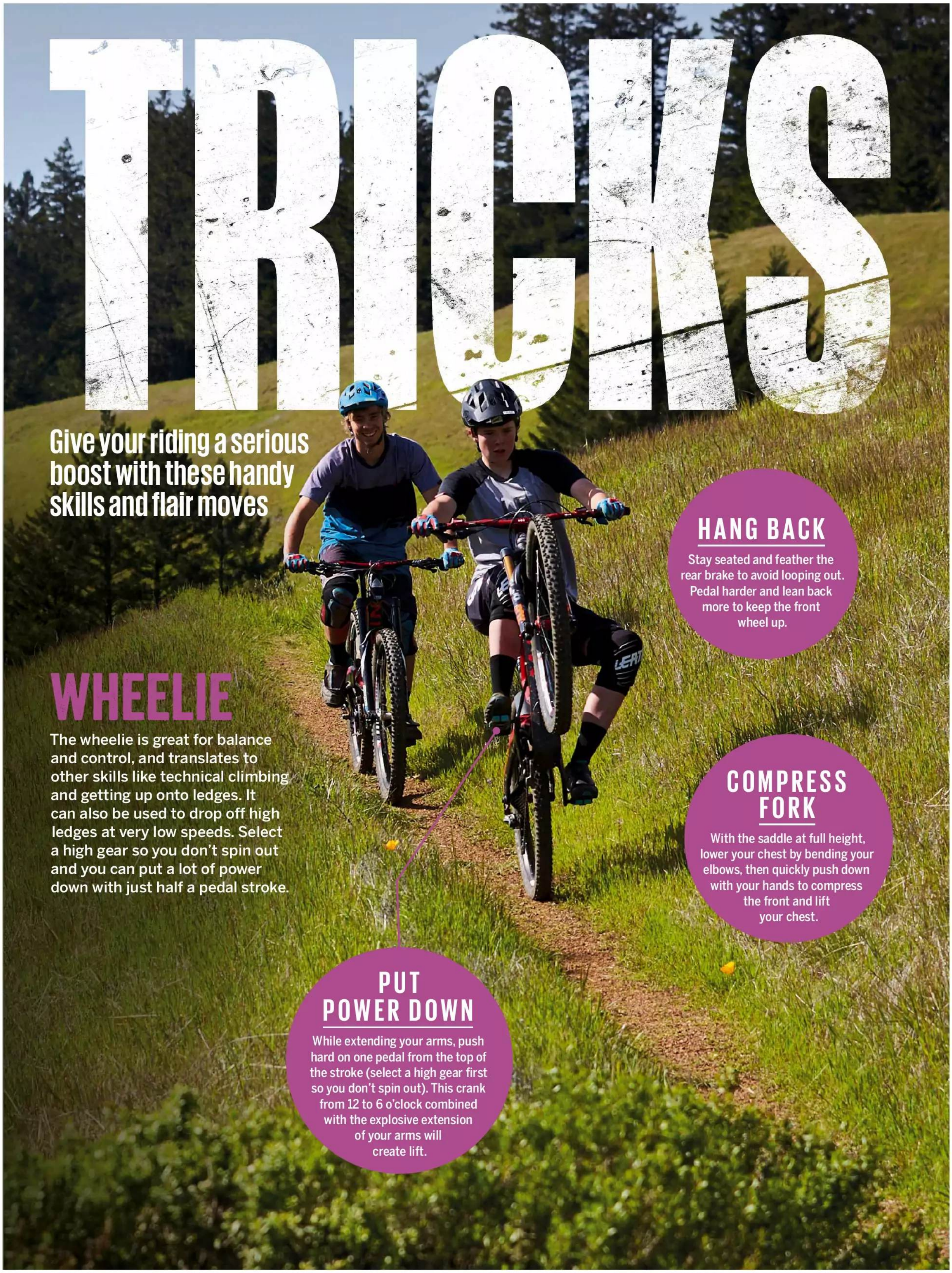
There's huge satisfaction in nailing a technical climb, so it's worth persevering. It may be a whole new skill for you to learn, because steep hills can be simply impossible on a normal trail bike. There are crossovers with trials riding, in terms of momentum, grip, drive and body position. Add this skill to your repertoire with some training and enjoy a whole new way to ride.

KEEP THE FRONT END DOWN

In Boost mode on a steep uphill, the front end may lift. Many failed ascents are actually due to looping-out the bike or losing grip on the front wheel. Lowering the saddle height will help keep your weight forward while still allowing the back wheel to drive properly.

TRICKS

Give your riding a serious boost with these handy skills and flair moves



WHEELIE

The wheelie is great for balance and control, and translates to other skills like technical climbing and getting up onto ledges. It can also be used to drop off high ledges at very low speeds. Select a high gear so you don't spin out and you can put a lot of power down with just half a pedal stroke.

HANG BACK

Stay seated and feather the rear brake to avoid looping out. Pedal harder and lean back more to keep the front wheel up.

COMPRESS FORK

With the saddle at full height, lower your chest by bending your elbows, then quickly push down with your hands to compress the front and lift your chest.

PUT POWER DOWN

While extending your arms, push hard on one pedal from the top of the stroke (select a high gear first so you don't spin out). This crank from 12 to 6 o'clock combined with the explosive extension of your arms will create lift.

MINION DHF
MAXXIS

BIKE SET-UP

It's crucial to have a sharp rear brake that you can feather with one finger. This will stop you flipping onto your back! Making sure the saddle is down and out of the way will also make the bike easier to control.

HAVING TROUBLE

If you're finding the manual hard to master, try sitting on the saddle with both feet on the ground and your front wheel in the air. Rock forwards and backwards, and feel for the balance point. This should give you an idea of how it should feel when you do it for real.

MANUAL

A manual is the same as a wheelie, just without pedalling. Riding on just the rear wheel, you use transfers of bodyweight and the rear brake to hold the bike perfectly on the balance point. You can use the manual to link tricks and lines, whether out on the trail, down at the skate park or riding street.

Learning to manual requires some trial and error as you try to find the balance point, but once it clicks you'll be able to go as far as your speed carries you. Then you can try styling it up, by turning the bar or even taking a hand off if you want to be really cool!

1 GET IN POSITION

Travel at a fast walking speed while standing up on the bike, keeping your weight central and your knees and elbows slightly bent, ready to lift the front wheel. It's important to keep one finger over the rear brake lever at all times. If at any point you feel the manual is going out of control, slam the rear brake on and this will instantly drop the front wheel back to the ground.

2 FIND BALANCE POINT

Now, you need to lift the front wheel. The height is going to vary depending on your balance point, but it wants to be roughly 1.5ft off the ground. Transfer your weight back, getting your bum over the rear axle, while pushing both feet into the pedals and gently pulling on the bar. The first few times, just get used to the wheel being off the ground. You can even try pulling it slightly higher than necessary and then slamming the brake on, to get yourself used to reacting when it starts to go wrong.

3 CONTROL THE MANUAL

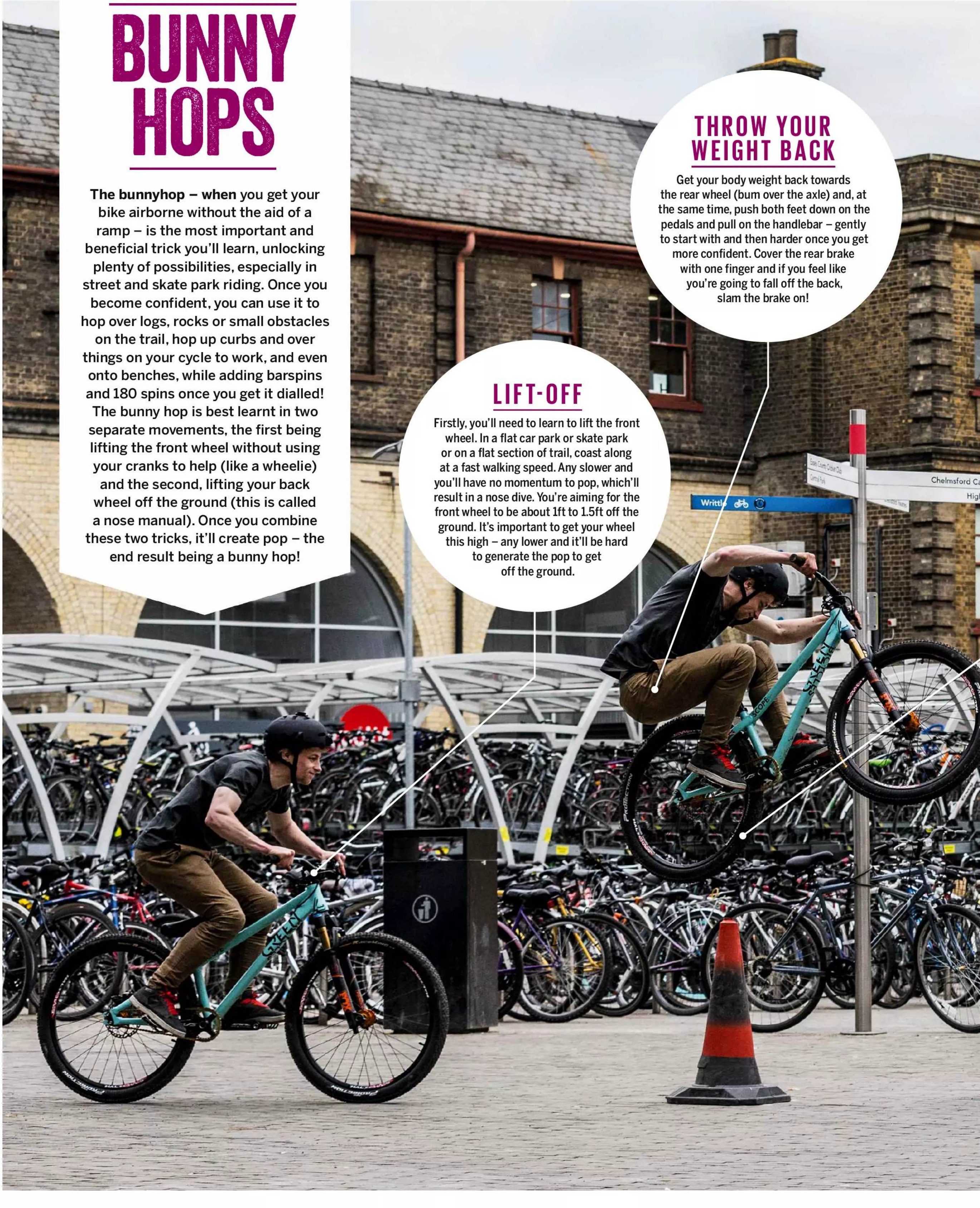
Next, you need to learn to control the bike. As before, get your bum over the rear axle, with knees bent and arms almost straight. If the wheel starts dropping, push with your feet and pull with your arms to put yourself into a more upright position. If you find yourself going too far back, feather the rear brake to control the height of the front wheel. The more you do these movements, the more confidence you'll have and in-control you'll feel.

4 ADVANCED SKILLS

Once you start to link these movements, you should be covering some distance. If the bike isn't tracking straight, you're probably pulling on the bar and pushing on the cranks more on one side than the other. If you're pulling evenly and the bike is still leaning to one side, use your knees to straighten her up. Once you've mastered the basics, it's time to learn how to turn. Point your head in the direction you wish to go, lean your body into the turn and point your shoulders in that direction too.

BUNNY HOPS

The bunnyhop – when you get your bike airborne without the aid of a ramp – is the most important and beneficial trick you'll learn, unlocking plenty of possibilities, especially in street and skate park riding. Once you become confident, you can use it to hop over logs, rocks or small obstacles on the trail, hop up curbs and over things on your cycle to work, and even onto benches, while adding barspins and 180 spins once you get it dialled! The bunny hop is best learnt in two separate movements, the first being lifting the front wheel without using your cranks to help (like a wheelie) and the second, lifting your back wheel off the ground (this is called a nose manual). Once you combine these two tricks, it'll create pop – the end result being a bunny hop!

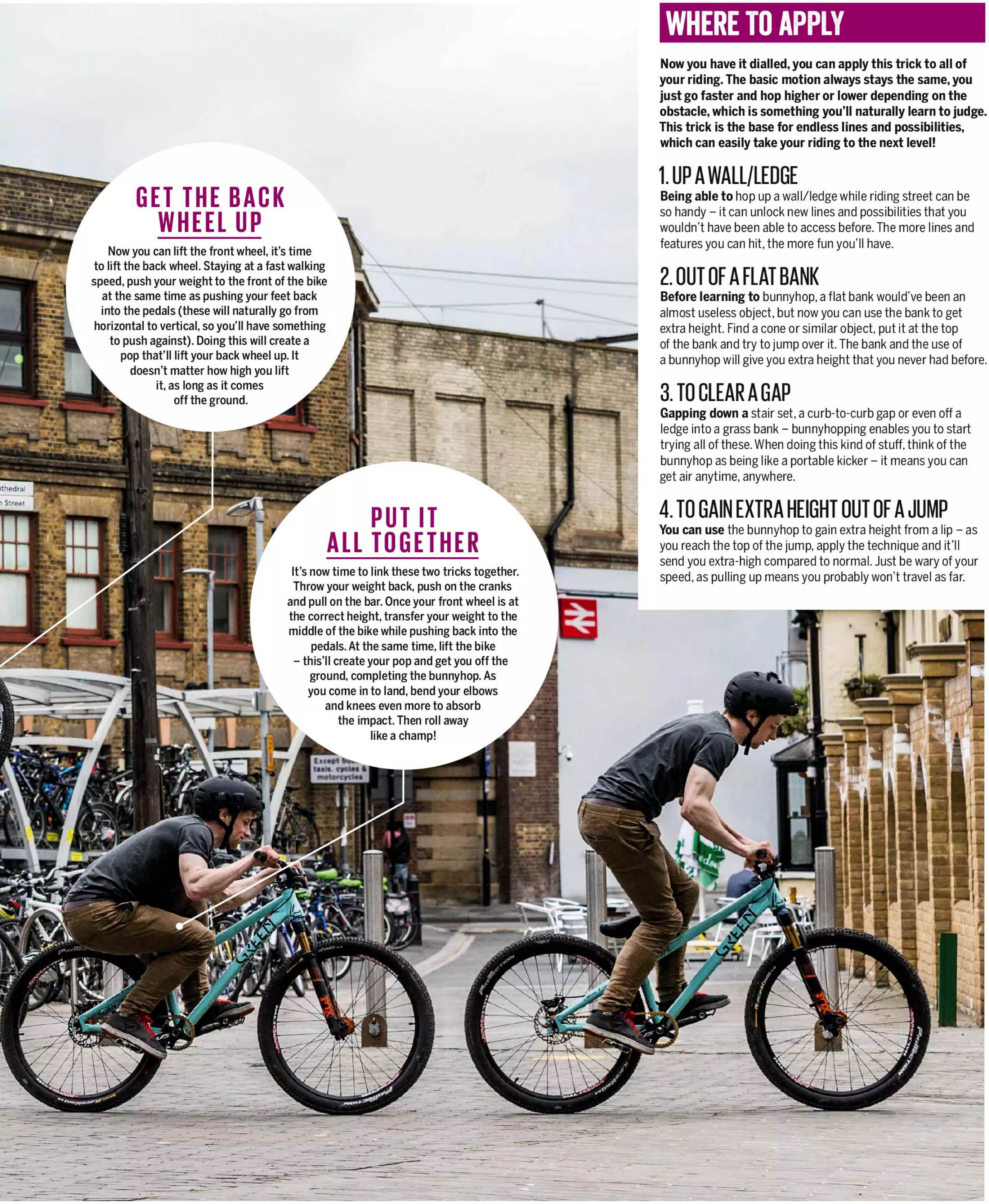


LIFT-OFF

Firstly, you'll need to learn to lift the front wheel. In a flat car park or skate park or on a flat section of trail, coast along at a fast walking speed. Any slower and you'll have no momentum to pop, which'll result in a nose dive. You're aiming for the front wheel to be about 1ft to 1.5ft off the ground. It's important to get your wheel this high – any lower and it'll be hard to generate the pop to get off the ground.

THROW YOUR WEIGHT BACK

Get your body weight back towards the rear wheel (bum over the axle) and, at the same time, push both feet down on the pedals and pull on the handlebar – gently to start with and then harder once you get more confident. Cover the rear brake with one finger and if you feel like you're going to fall off the back, slam the brake on!



GET THE BACK WHEEL UP

Now you can lift the front wheel, it's time to lift the back wheel. Staying at a fast walking speed, push your weight to the front of the bike at the same time as pushing your feet back into the pedals (these will naturally go from horizontal to vertical, so you'll have something to push against). Doing this will create a pop that'll lift your back wheel up. It doesn't matter how high you lift it, as long as it comes off the ground.

PUT IT ALL TOGETHER

It's now time to link these two tricks together. Throw your weight back, push on the cranks and pull on the bar. Once your front wheel is at the correct height, transfer your weight to the middle of the bike while pushing back into the pedals. At the same time, lift the bike – this'll create your pop and get you off the ground, completing the bunnyhop. As you come in to land, bend your elbows and knees even more to absorb the impact. Then roll away like a champ!

WHERE TO APPLY

Now you have it dialled, you can apply this trick to all of your riding. The basic motion always stays the same, you just go faster and hop higher or lower depending on the obstacle, which is something you'll naturally learn to judge. This trick is the base for endless lines and possibilities, which can easily take your riding to the next level!

1. UP A WALL/LEDGE

Being able to hop up a wall/ledge while riding street can be so handy – it can unlock new lines and possibilities that you wouldn't have been able to access before. The more lines and features you can hit, the more fun you'll have.

2. OUT OF A FLAT BANK

Before learning to bunnyhop, a flat bank would've been an almost useless object, but now you can use the bank to get extra height. Find a cone or similar object, put it at the top of the bank and try to jump over it. The bank and the use of a bunnyhop will give you extra height that you never had before.

3. TO CLEAR A GAP

Gapping down a stair set, a curb-to-curb gap or even off a ledge into a grass bank – bunnyhopping enables you to start trying all of these. When doing this kind of stuff, think of the bunnyhop as being like a portable kicker – it means you can get air anytime, anywhere.

4. TO GAIN EXTRA HEIGHT OUT OF A JUMP

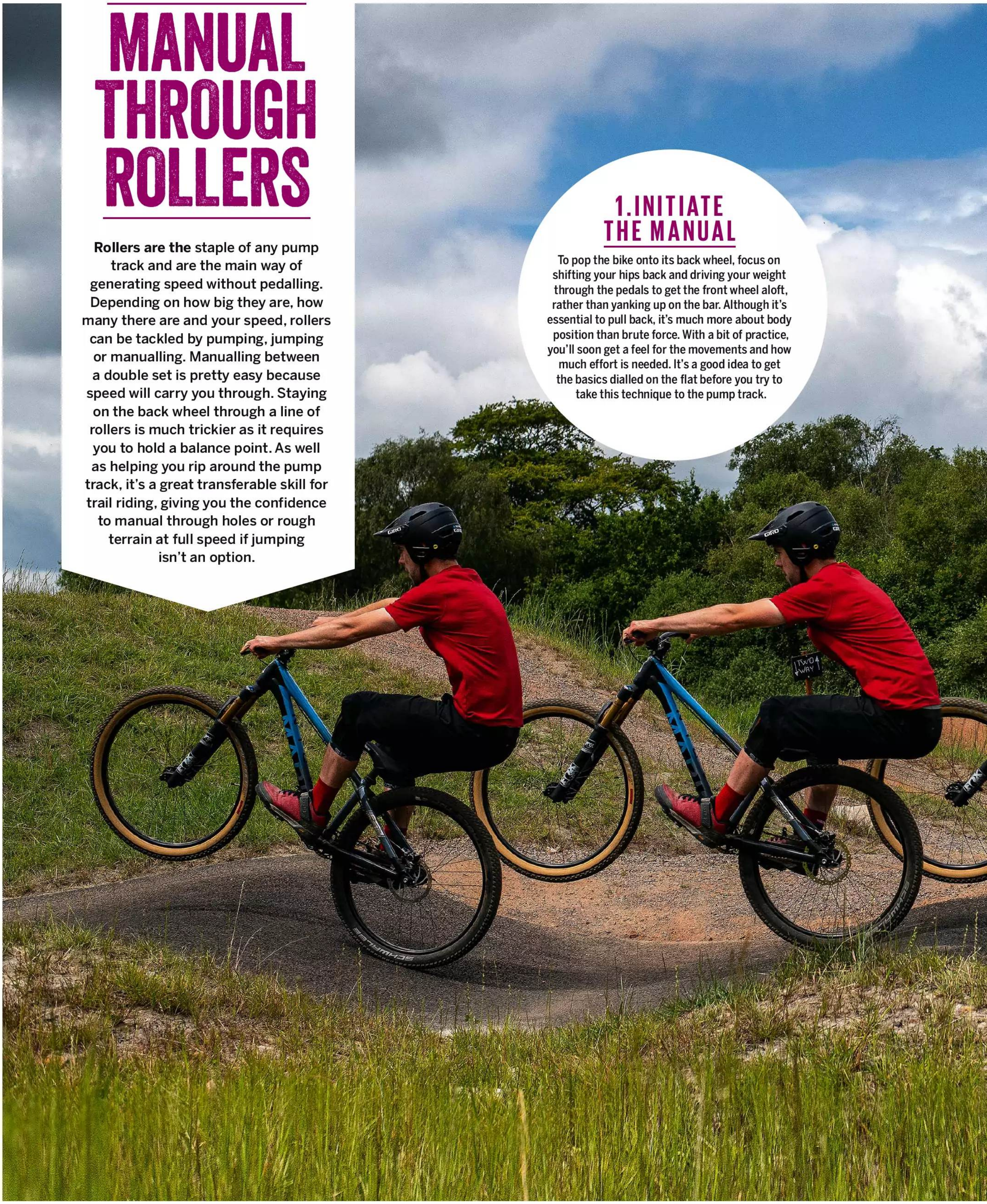
You can use the bunnyhop to gain extra height from a lip – as you reach the top of the jump, apply the technique and it'll send you extra-high compared to normal. Just be wary of your speed, as pulling up means you probably won't travel as far.

MANUAL THROUGH ROLLERS

Rollers are the staple of any pump track and are the main way of generating speed without pedalling. Depending on how big they are, how many there are and your speed, rollers can be tackled by pumping, jumping or manualling. Manualling between a double set is pretty easy because speed will carry you through. Staying on the back wheel through a line of rollers is much trickier as it requires you to hold a balance point. As well as helping you rip around the pump track, it's a great transferable skill for trail riding, giving you the confidence to manual through holes or rough terrain at full speed if jumping isn't an option.

1. INITIATE THE MANUAL

To pop the bike onto its back wheel, focus on shifting your hips back and driving your weight through the pedals to get the front wheel aloft, rather than yanking up on the bar. Although it's essential to pull back, it's much more about body position than brute force. With a bit of practice, you'll soon get a feel for the movements and how much effort is needed. It's a good idea to get the basics dialled on the flat before you try to take this technique to the pump track.

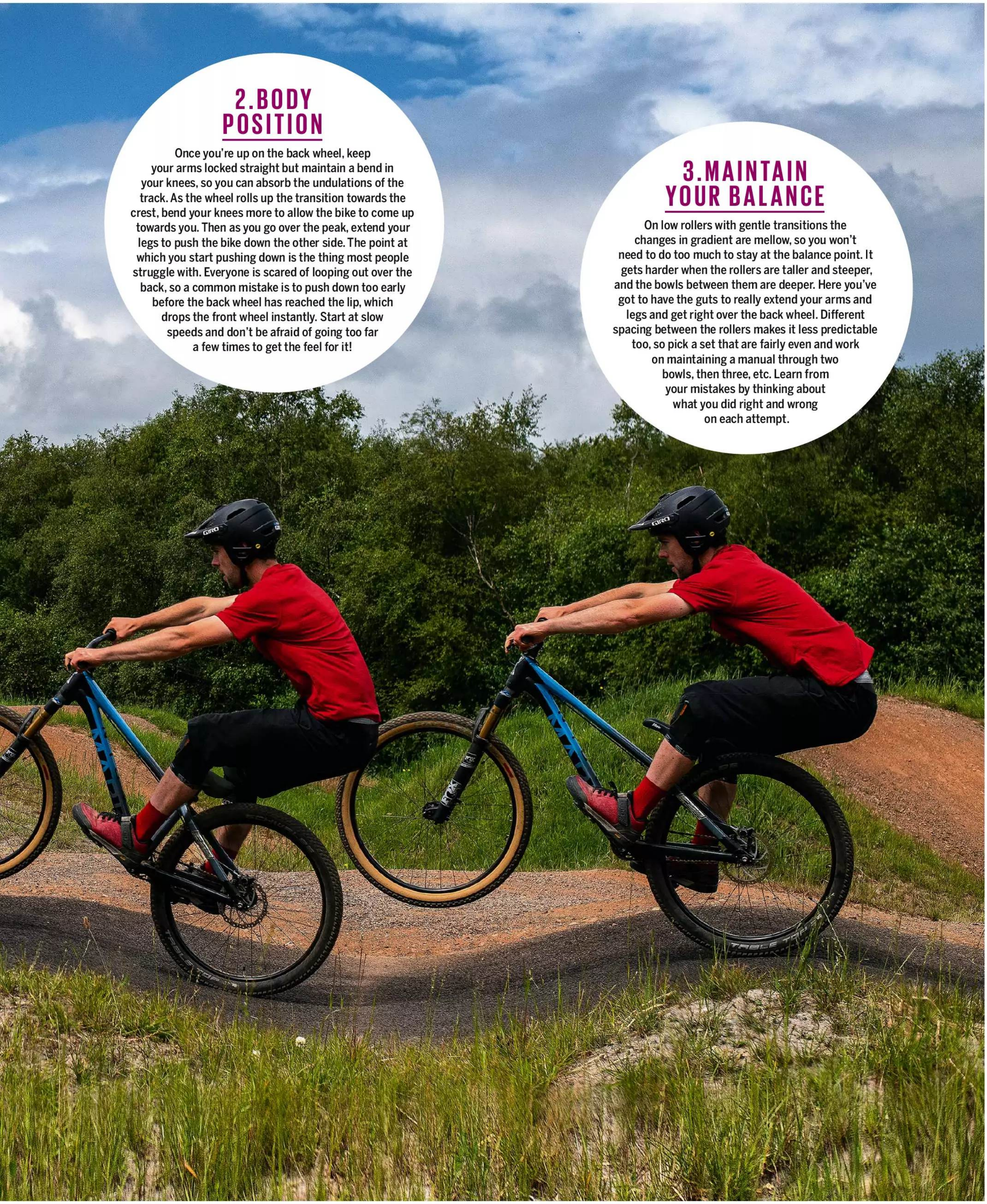


2.BODY POSITION

Once you're up on the back wheel, keep your arms locked straight but maintain a bend in your knees, so you can absorb the undulations of the track. As the wheel rolls up the transition towards the crest, bend your knees more to allow the bike to come up towards you. Then as you go over the peak, extend your legs to push the bike down the other side. The point at which you start pushing down is the thing most people struggle with. Everyone is scared of looping out over the back, so a common mistake is to push down too early before the back wheel has reached the lip, which drops the front wheel instantly. Start at slow speeds and don't be afraid of going too far a few times to get the feel for it!

3.MAINTAIN YOUR BALANCE

On low rollers with gentle transitions the changes in gradient are mellow, so you won't need to do too much to stay at the balance point. It gets harder when the rollers are taller and steeper, and the bowls between them are deeper. Here you've got to have the guts to really extend your arms and legs and get right over the back wheel. Different spacing between the rollers makes it less predictable too, so pick a set that are fairly even and work on maintaining a manual through two bowls, then three, etc. Learn from your mistakes by thinking about what you did right and wrong on each attempt.



SCANDI FLICK

Originating from rally car racing, the Scandi flick is one of those feelgood skills. It looks awesome, will make your buddies behind you whoop and holler, and can actually help you get round corners too. The idea is to use a rear-end drift or skid to send your bike towards the outside of the turn (the 'flick') and to then re-weight the back tyre and push through the apex.

WEIGHT THE FRONT

When you start feeling more confident, it really pays to weight the front wheel as you approach the corner. This will make the back end lighter, which will help you to swing it round the turn quickly. Then you need to be ready to reload the rear wheel in the apex to generate speed out of the corner and into the next section of trail.

EYES ON THE PRIZE

Always make sure you're looking up and around the corner. Where your head looks, your shoulders follow, then your hips and the bike. You can see here that the bike and body are going one way but the head is clearly looking the other way, around the corner.

BE RELAXED

It's important to stay loose and relaxed so that the bike can move around underneath you. Have faith in your riding skills and don't fight the bike!

THE SCANDI FLICK

1 INITIATE THE FLICK

As you approach the corner, aim for the inside quite early. Then grab a bit of rear brake and steer up towards the outside of the turn. This will cause the back end of the bike to fall lower than the front.

2 MID-TURN

From now on don't brake. The Scandi flick will have slowed you down for the corner and set you up perfectly to carry good speed through it.

3 AIM FOR THE EXIT

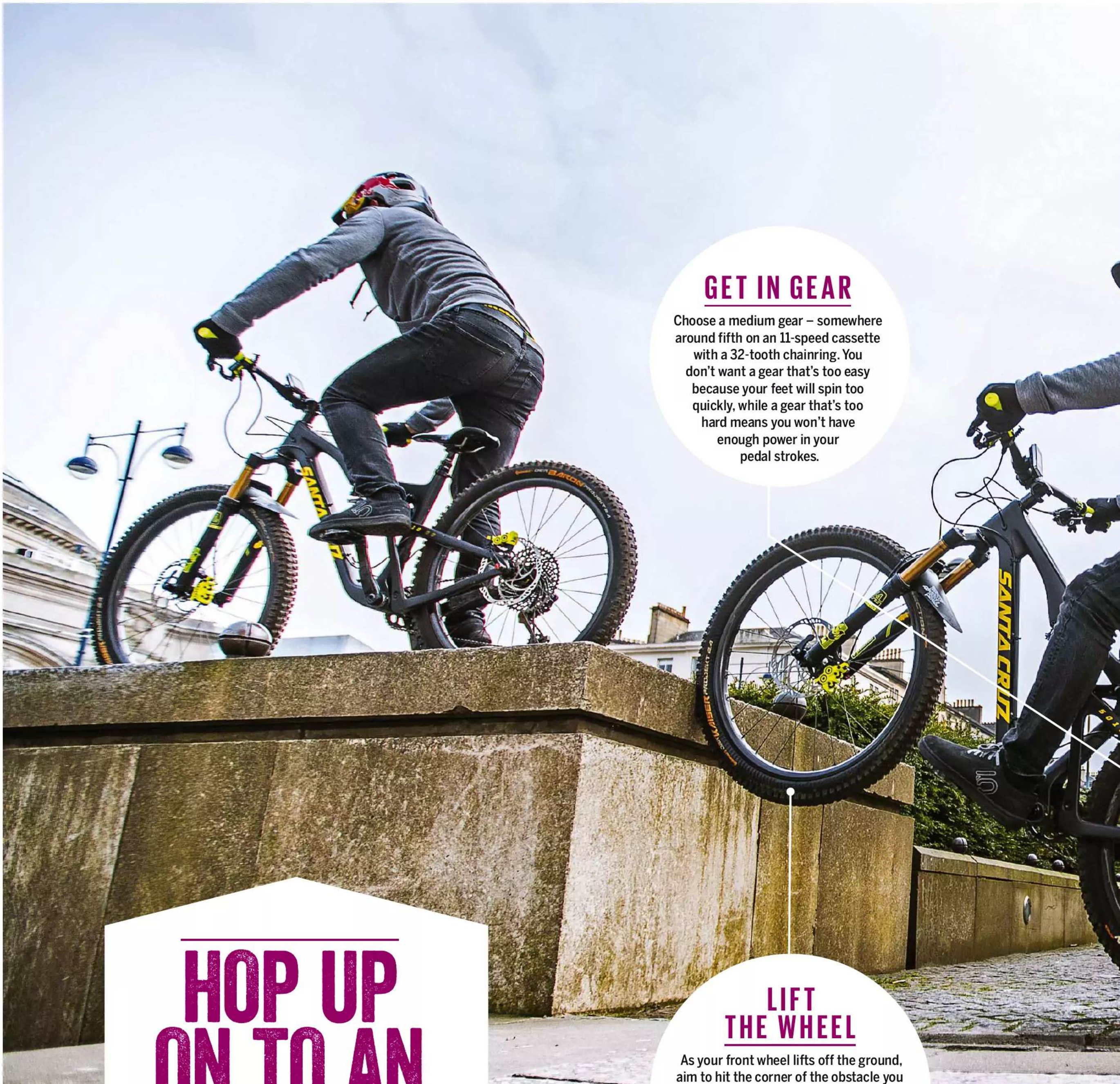
Look for your exit point, lean in and rail the corner. The faster you go, the easier it'll be. You can rely on centrifugal force to pull you straight.

4 FEEL GOOD!

It feels awesome when you get it right. People tend to think a Scandi flick is just something that looks good, so they grab a handful of rear brake and do a skid. But it's a lot more than this, and can be a really helpful skill in the right corner. When you get the hang of it, it should just happen naturally.

5 SECRETS TO SUCCESS

Off-camber corners are a good place to practise because they'll naturally push the back end downhill, aiding the pendulum motion and getting the rear wheel around the turn quickly.



GET IN GEAR

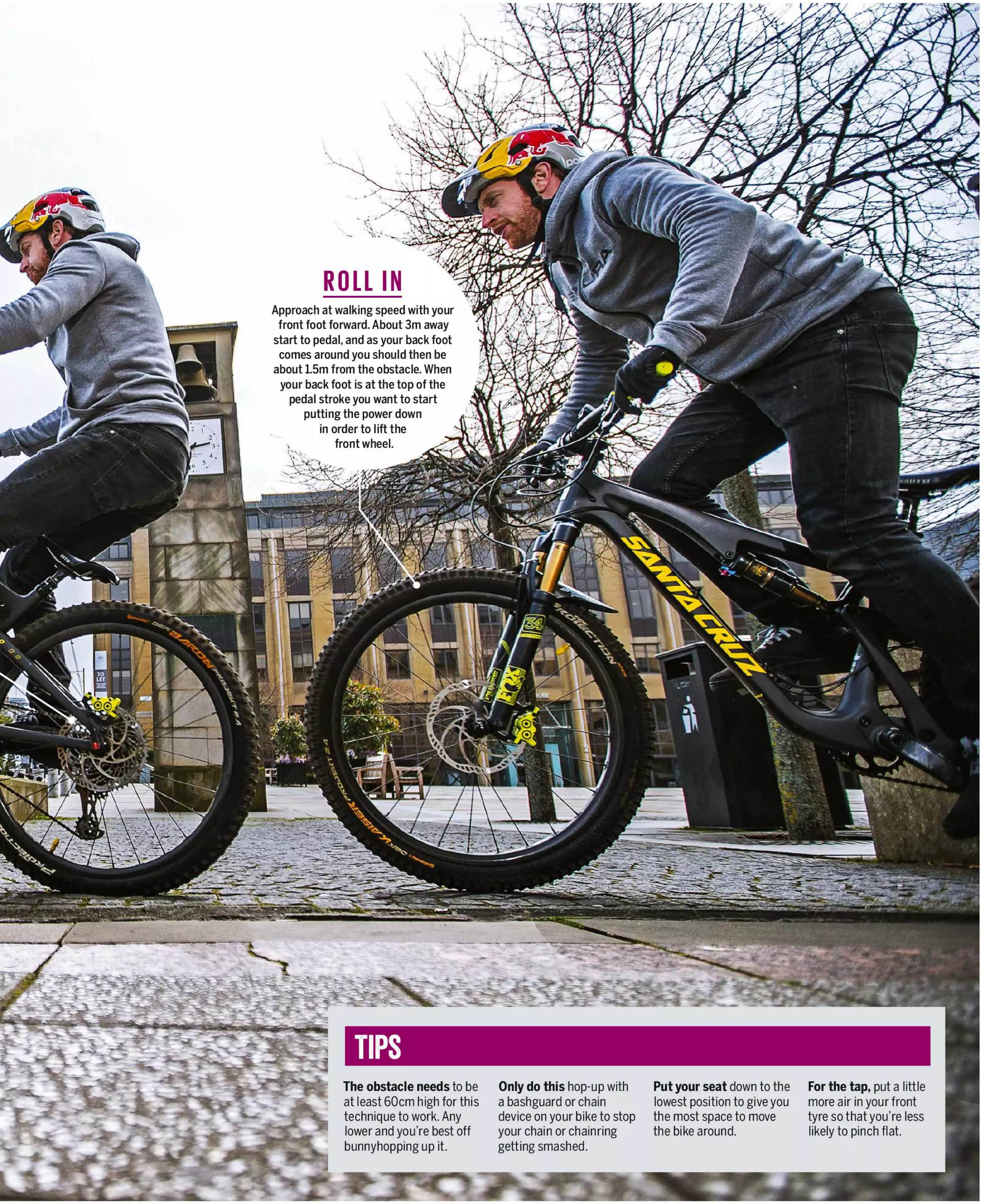
Choose a medium gear – somewhere around fifth on an 11-speed cassette with a 32-tooth chainring. You don't want a gear that's too easy because your feet will spin too quickly, while a gear that's too hard means you won't have enough power in your pedal strokes.

LIFT THE WHEEL

As your front wheel lifts off the ground, aim to hit the corner of the obstacle you want to get up with your front tyre. Your good foot should be at the front now. When you hit the ledge, thrust your hips forward and push your arms forward to lift the back wheel up, and land on top of the obstacle with both wheels.

HOP UP ON TO AN OBSTACLE

This is a technique where you use a front wheel tap to get on to an obstacle. Hitting your front wheel into the obstacle is what generates the upward momentum to get the bike on top of it, especially with a full-susser. This technique involves very precise timing of both the pedal strokes and the front wheel placement to make it work.



ROLL IN

Approach at walking speed with your front foot forward. About 3m away start to pedal, and as your back foot comes around you should then be about 1.5m from the obstacle. When your back foot is at the top of the pedal stroke you want to start putting the power down in order to lift the front wheel.

TIPS

The obstacle needs to be at least 60cm high for this technique to work. Any lower and you're best off bunnyhopping up it.

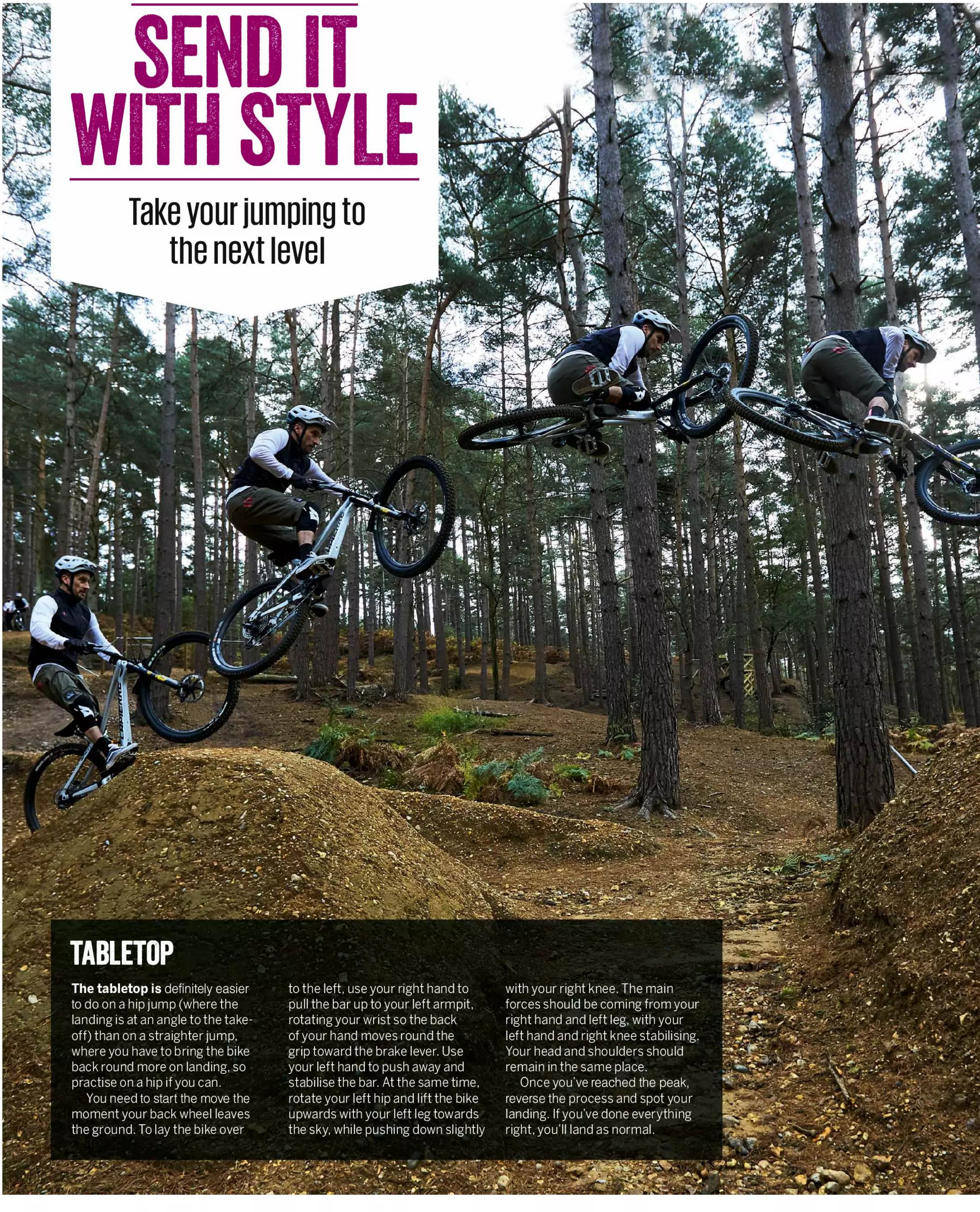
Only do this hop-up with a bashguard or chain device on your bike to stop your chain or chainring getting smashed.

Put your seat down to the lowest position to give you the most space to move the bike around.

For the tap, put a little more air in your front tyre so that you're less likely to pinch flat.

SEND IT WITH STYLE

Take your jumping to the next level



TABLETOP

The tabletop is definitely easier to do on a hip jump (where the landing is at an angle to the take-off) than on a straighter jump, where you have to bring the bike back round more on landing, so practise on a hip if you can.

You need to start the move the moment your back wheel leaves the ground. To lay the bike over to the left, use your right hand to pull the bar up to your left armpit, rotating your wrist so the back of your hand moves round the grip toward the brake lever. Use your left hand to push away and stabilise the bar. At the same time, rotate your left hip and lift the bike upwards with your left leg towards the sky, while pushing down slightly with your right knee. The main forces should be coming from your right hand and left leg, with your left hand and right knee stabilising. Your head and shoulders should remain in the same place.

Once you've reached the peak, reverse the process and spot your landing. If you've done everything right, you'll land as normal.

BAR TWEAK

When you're trail riding, you can often use speed to clear jumps, but if you want to add some tricks, you need to be able to pop off them, This will maximise your airtime over even the smallest jumps, allowing you to style it up.

Start by practising bunnyhops. Get used to the feeling of pulling up with the front and having your back wheel follow the same path. Next, find a small jump to learn on. Don't let the bike do all the work, as you would when riding the trail, but pop in a fluid motion. Make sure the front wheel is a bit higher than the back, and try to be as relaxed as possible, while using the 'gorilla' stance – elbows out, knees bent.

A bar tweak is the easiest trick to learn. You should only use your arms, and keep the rest of your body relaxed. To add a tweak, push one arm away and pull the other towards you, turning the bar in whichever direction you prefer. Then lean away from the tweak. So, if you're turning to the left, lean to the right. This will ensure that your centre of gravity remains constant. Make sure you have enough time to straighten up before you land. Keep your eyes ahead of the downslope and try to land with both wheels together.

Mountain Biking Skills

ALL THESE TECHNIQUES AND MANY MORE INSIDE...

BLACK TRAILS

- GNARLY ROOTS
- BIG DROPS
- LAUNCHING DROPS
- STEEP CHUTES
- STEEP TURNS
- SCRUBBING JUMPS
- BLIND JUMPS
- GAP JUMPS
- SENDING JUMPS

BLUE TRAILS

- PEDALLING
- CORNERING
- BRAKE CONTROL
- LINE CHOICE
- RIDING BERMS
- RIDING ROLLERS
- TABLETOP JUMPS
- UPHILL SWITCHBACKS
- RIDING IN MUD

RED TRAILS

- RIDING RUTS
- TACKLING ROOTS
- ROCK GARDENS
- GNARLY DESCENTS
- AGGRO BERMS
- BOOSTING JUMPS
- STEP DOWN JUMPS
- RIDING DROP OFFS
- STEEP CLIMBS

TRAIL TRICKS

- BUNNYHOPS
- WHEELIES
- MANUALS
- SCANDI FLICKS
- HOP ON OBSTACLES
- SEND IT WITH STYLE